

School of Pharmacy
University of Md



MEMBERS OF THE
MARYLAND PHARMACEUTICAL ASSOCIATION AND THEIR FRIENDS.
PLIMHIMON CASINO, JULY 12 1899.

SEVENTEENTH
Annual Proceedings
OF THE
MARYLAND
PHARMACEUTICAL
ASSOCIATION,

Ocean City, Md., July 11-15, 1899.

INCLUDING :

MINUTES, PRESIDENT'S ADDRESS,
REPORTS OF COMMITTEES, PAPERS READ,
LIST OF OFFICERS AND MEMBERS,
CONSTITUTION AND BY-LAWS.

The Next Annual Meeting
OF THE
Maryland Pharmaceutical Association,
Will be Held at
HAGERSTOWN, MD., JUNE, 1900.

—•—
D. C. AUGHINBAUGH, *Local Secretary,*
HAGERSTOWN, MD.

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OFFICERS FOR 1899-1900.

ALFRED R. L. DOHME, PH. D., *President.*
BALTIMORE.

C. C. WALTS, *First Vice-President.*
HAGERSTOWN.

JOHN M. WIESEL, *Second Vice-President.*
BALTIMORE.

C. H. MICHAEL, *Third Vice-President.*
REISTERSTOWN.

CHARLES H. WARE, *Secretary.*
1930 Madison Avenue, Baltimore, Md.

WILLIAM M. FOUCH, *Treasurer.*
Cor. North Ave. and Charles St., Baltimore, Md.

PAST OFFICERS.

Presidents.

1883—J. J. Thomsen,	1891—Columbus V. Emich.
1884—D. C. Aughinbaugh,	1892—John Briscoe, M. D.,
1885—Edwin Eareckson, M. D.,	1894—John F. Hancock,
1886—A. J. Corning,	1895—Henry P. Hynson,
1887—William Simon, M. D.,	1896—H. B. Gilpin,
1888—J. Walter Hodges,	1897—W. C. Powell,
1889—M. L. Byers,	1898—Robt. S. McKinney.
1890—E. M. Forman,	

First Vice-Presidents.

1883—C. W. Crawford,	1891—John Briscoe, M. D.,
1884—Steiner Schley,	1892—T. W. Smith,
1885—Levin D. Collier,	1894—Henry P. Hynson,
1886—Jos. B. Boyle,	1895—J. W. Cook,
1887—C. W. Crawford,	1896—Robt. S. McKinney,
1888—C. H. Redden,	1897—W. S. Merrick,
1889—D. M. R. Culbreth, M. D.,	1898—August Schrader.
1890—Charles Caspari, Jr.,	

Second Vice-Presidents.

1883—Thos. W. Shryer,	1891—F. A. Harrison,
1884—A. J. Corning,	1892—J. Fuller Frames,
1885—Henry T. Wooters,	1894—C. B. Henkel, M. D.,
1886—	1895—Geo. E. Pearce,
1887—J. Walter Hodges,	1896—Steiner Schley,
1888—J. F. Leary,	1897—Louis Schulze,
1889—Jos. B. Garrott,	1898—Eugene Worthington.
1890—D. C. Aughinbaugh,	

Third Vice-Presidents.

1883—Hugh Duffy,	1891—J. E. Henry,
1884—Levin D. Collier,	1892—C. B. Henkel, M. D.,
1885—T. W. Smith,	1894—George E. Pearce,
1886—J. Walter Hodges,	1895—J. W. Smith,
1887—Henry A. Elliott,	1896—Thos. H. Jenkins,
1888—John Briscoe, M. D.,	1897—A. Eugene De Reeves.
1889—E. M. Forman,	
1890—J. H. Hancock,	1898—C. C. Ward, M. D.

Secretaries.

1883—John W. Geiger,	1895—J. H. Hancock,
1884-88—M. L. Byers,	1896—Henry Maisch,
1889-94—John W. Geiger,	1897-98—Charles H. Ware.

Treasurers.

1883-85—E. Walton Russell,	1895—Henry B. Gilpin,
1886-94—Samuel Mansfield,	1896-98—D. M. R. Culbreth, M. D.

COMMITTEES.

Executive.

J. WEBB FOSTER, *Chairman*, Baltimore.

A. Eugene De Reeves, Cambridge. John G. Beck, Baltimore.

Legislative.

E. M. FORMAN, *Chairman*, Centreville.

LOUIS SCHULZE, *Vice-Chairman*, Baltimore.

A. J. Corning, W. C. Powell, D. C. Aughinbaugh.

Pharmacy.

CHARLES SCHMIDT, *Chairman*, Baltimore.

Charles Caspari, Jr., Charles L. Meyer,
William Simon, M. D., H. R. Rudy.

Trade Interests.

HENRY P. HYNSON, *Chairman*, Baltimore.

John B. Thomas, S. LeRoy Robinson,
H. S. Meredith, John S. Miller.

Business.

ROBT. S. MCKINNEY, *Chairman*, Taneytown.

D. P. Schindel, David R. Millard,
O. C. Smith, F. J. Lloyd.

Laws.

DAVID M. R. CULBRETH, M. D., *Chairman*, Baltimore.

J. F. Hancock, Steiner Schley.

Adulterations.

DANIEL BASE, *Chairman*, Baltimore.

A. J. G. Raiber, E. Riall White.

Pure Food and Drug Laws. (Special.)

LOUIS SCHULZE, *Chairman*, Baltimore.

A. J. Corning, Chas. Caspari, Jr., E. J. M. Button.

Committee to Confer with Medical Societies. (Special.)

A. J. CORNING, *Chairman*, Baltimore.

Henry P. Hynson, Chas. Caspari, Jr.

Local Organizations. (Special.)

D. C. Aughinbaugh, W. C. Powell.

DELEGATIONS.

American Pharmaceutical Association,

Put-in Bay, Ohio, September 4, 1899.

J. Webb Foster,
J. G. Beck,

W. C. Powell,
A. Eugene De Reeves.

Convention for the Revision of the U. S. Pharmacopœia.

Prof. Chas. Caspari, Jr.

A. R. L. Dohme, Ph. D., Henry P. Hynson, Ph. G.

ALTERNATES.

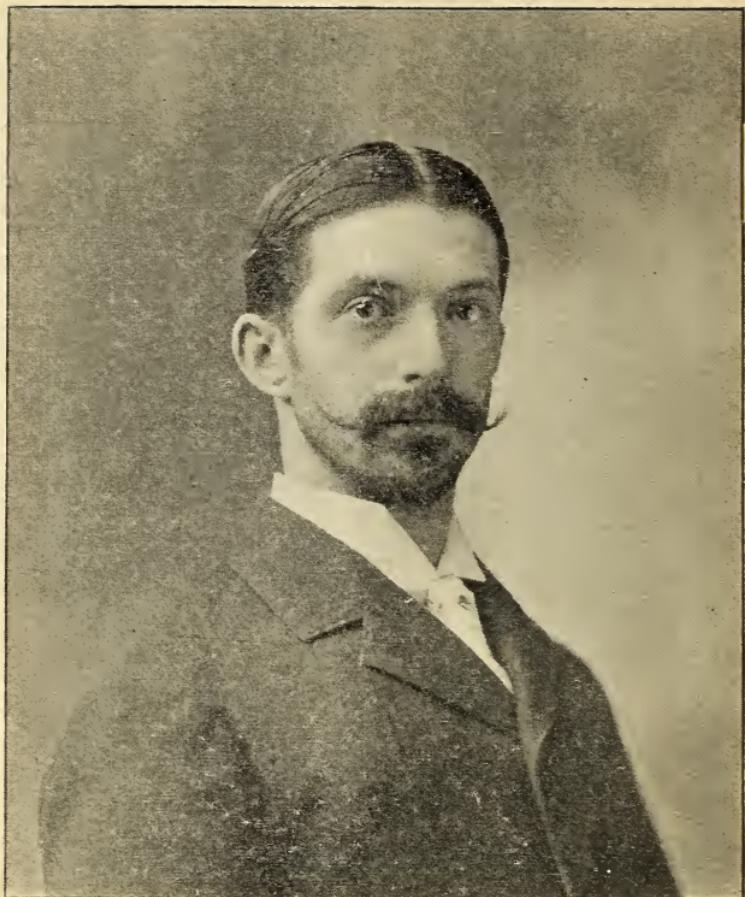
A. J. Corning, Louis Schulze, W. C. Powell.

National Association of Retail Druggists.

Henry P. Hynson.

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ALFRED R. L. DOHME,
President Maryland Pharmaceutical Association 1899-1900.

ALFRED R. L. DOHME,

The present incumbent of the Presidential Chair of our Association, was born in the city of Baltimore, in 1867, in the building which is now part of the laboratories of the firm of Sharp & Dohme. He is the son of Mr. Charles E. Dohme of this firm. While attending school he spent all his spare time in the drug store originally owned by Mr. A. P. Sharp, from 1845 to 1857, and then by Sharp & Dohme, and there no doubt first imbibed his love for chemistry and pharmacy. Entering the Johns Hopkins University in 1883, he received his bachelor's degree in 1886 and continued as a post graduate for three years longer, when in 1889 he received his degree of Doctor of Philosophy his subjects being chemistry, mineralogy and geology. A week later after receiving his degree he was off for Germany, where he continued his studies for two semesters longer, in chemistry, pharmacy, pharmaceutical chemistry, pharmacology and both structural and systematic botany, at the University of Berlin, under Professors A. W. von Hofmann, Martin Freund, Oscar Liebreich, H. Schwendener and W. Garske. Then he entered the institute of Prof. Fresenius at Wiesbaden and became at once the private assistant of Prof. Fresenius in his analytical and technical laboratory; remaining there one semester. The next semester he spent in the private laboratory of Prof. F. A. Flueckiger at Strassburg, pursuing courses in pharmacy, pharmacognosy, pharmaceutical chemistry and structural as well as histological botany. While here he had the high privilege, as he had had under Prof. von Hofmann in Berlin, of participating in the Professor's research work and enjoying the use of the Professor's private library. Returning to this country in 1891, he at once entered the laboratories of Mess. Sharp & Dohme, where he has ever since been engaged as director of the analytical and research laboratory and recently also as assistant manager of the manufacturing laboratories of that firm.

PROCEEDINGS

OF THE

SEVENTEENTH ANNUAL MEETING.

FIRST SESSION.

OCEAN CITY, MD., July 11th, 1899.

The Seventeenth Annual Meeting of the Maryland State Pharmaceutical Association was held in the Casino of the Plim-himmon Hotel, July 11-15th, 1899. The first session opened at 4 P. M., July 11th. The meeting was called to order by President Robt. S. McKinney.

THE PRESIDENT: Ladies and Gentlemen: I take great pleasure in introducing Hon. John P. Moore, Mayor of Snow Hill, who will deliver the address of welcome.

MAYOR MOORE: I feel highly honored, that it has fallen to my lot to welcome to Ocean City such a goodly number of representative people assembled before me to-day, hailing from the grand old State of Maryland, famous alike for the fine men and women she has produced, as well as the excellence and abundance of her gastronomical delicacies. And this very abundance of delicacies is perhaps one of the chief reasons why druggists thrive so well in this State, as we are all prone to over-indulgence in the good things of this life, and these past pleasures often bring painful memories which can only be relieved by a dose of physic from the nearest drug store. Many of us would like to be druggists, if we could, but as the front seats are almost taken, we humbly submit to fate, swallow our medicine, pay the bill and try to smile. I am a believer to a great extent in the theory of

the "survival of the fittest," and more so than ever, when I recall that once upon a time this genus homo of pharmatists did not exist. We used to have apothecaries and druggists, but the pharmacist is a latter day development. He did not mature all at once, but is an evolutionary outgrowth of an antediluvian trilobite, and indeed we may even conclude his origin to be pre-Adamite. In that first great surgical operation of which we have record, when lovely women was created in beautiful form from one of the best ribs from old Adam's body, scripture does not tell us whether iodoform, or other drugs of like character, were used during this performance, but certain I am one of the ancient pill mixers must have been somewhere around, otherwise the whole business might have been a dismal failure. In turn alchemists, astrologers, with doctors, apothecaries and druggists have represented the sacred art, until to-day we have in the pharmacist the highest development of this prosperous class, who combine the "wisdom of the serpent with the mildness of the dove."

Now, Mr. President, we are delighted to have you with us; Worcester County, and Ocean City especially, are honored by your presence, and you could not have complimented us more highly than by your selection of this town as your place of annual meeting. All that we have is yours, and we hope you may be so well pleased with your trip that every individual will purchase a lot and settle here for several months each summer. You will find us ever ready and willing to take in our friends, especially those who want to buy lots. We welcome the coming, but never speed the parting guest, so long as the hotels are open. But aside from all this, we are truly glad to have you here, on behalf of the people of this County and town, I extend to all of you a cordial welcome, and trust you may enjoy yourself to the fullest, and take away with you the pleasantest recollection of Maryland's famous seaside resort, with its pebbled beach, and broad Atlantic Ocean. (Applause.)

THE PRESIDENT. We will now listen to Mr. A. J. Corning, in reply:

MR. HYNSON: I would like to say, that Mr. Corning is called the Jay Gould of Ocean City.

MR. CORNING: Mr. President and Ladies and Gentlemen: I am very glad to have the honor of replying to the address of our distinguished guest, who has so cordially welcomed us. I am sure we all esteem it an honor to have Mayor Moore with us, and not one of us will be so ungrateful as not to appreciate the many advantages offered here in Ocean City, to the pleasure seeker; we intend to enjoy them to their fullest extent, and when in after years our thoughts drift back to the Convention of '99, held in this city, they will be of the fondest recollections. Just as the Queen of Sheba journeyed from a distant country to bring her choicest treasures, to lay at the feet of Solomon, so we come to Ocean City with our myrrh and frankincense and other drugs, to give to her inhabitants; and may they profit by our example and amass great riches as we are said to have done. As the Jay Gould, of Ocean City, I am well acquainted with her resources. In fact the Keys of the City are at my disposal. I hope you are here for a jolly good time, and if you are invited down to the little square building, with iron bars, after partaking of some of the gastronomical delicacies not mentioned by Mayor Moore, I assure you I have a "big pull," and I will get you out and give you the freedom of the boulevards and rolling billows.

THE PRESIDENT: The Secretary will now call the roll and read the minutes of the last meeting.

Dr. CULBRETH: As the minutes of the last Annual Meeting have been published. I move that they be dispensed with.

Passed.

THE PRESIDENT: The Secretary will now read the credentials from visiting delegates and any other communications of interest.

PENNSYLVANIA PHARMACEUTICAL ASSOCIATION.

CREDENTIALS.

Mr. C. H. Ware, Secretary,

Maryland Pharmaceutical Association,

This is to Certify, that at the last annual meeting of this Association, the following were appointed delegates to the Seventeenth

Annual Meeting of the Maryland Pharmaceutical Association, to be held at Ocean City, July 11-15th, 1899:

J. B. Raser, Reading.
Henry Mittnacht, Baltimore.
H. J. Mentzer, Waynesboro.
J. Gilbert Leber,

J. A. MILLER, *Secretary.*

THE SECRETARY: I do not think any of these delegates are present.

MR. HYNSON: Mr. Leber, from Pennsylvania is present.

MR. LEBER: Mr. President, Ladies and Gentlemen, I was selected at an unexpected moment as a delegate from the Pennsylvania Pharmaceutical Association. The pleasure that it affords me to meet the Maryland Pharmaceutical Association is by no means meager, nor limited by my being accredited as delegate from the sister State of Pennsylvania, whose large and learned association sends greeting and best wishes to this association, now assembled. I hope you may have a very pleasant time while in session at this delightful place, laboring for the enactment of a Pharmacy Law for your State, for I learn a bill is being prepared, to be presented to the next Legislature. Its passage will elevate and duly protect your Association and the Pharmacist of the State of Maryland. I am very glad to be with you and I regret that our State is not represented by more delegates. At our last meeting our association felt highly honored at having Mr. Hynson, your delegate, with them. His speeches were thoroughly enjoyed and in the future I hope you will be as ably represented.

Mr. Hynson was called upon by President McKinney to respond.

MR. HYNSON: My recollections of that trip are very pleasant indeed, as I was cordially welcomed, and the members did everything to make me enjoy myself, and I must say that their efforts were not in vain. The unexpected always happens, Mr. President; to make the rule good, I must not make a speech. In regard to a Pharmacy Bill, I will simply say, "I hope so, too." The representatives of the Pennsylvania Pharmaceutical Association are

always gladly welcomed to our meetings and we accept the kindly greetings Mr. Leber brings, with duly owned appreciation of the benefits derived from this interchange of delegates. We would have our guest take back with him to the Pharmacists of the great "Keystone State" the sincerest best wishes of their Maryland brothers.

MR. HYNSON: Mr. President and members of the Maryland Pharmaceutical Association, I want to introduce to you, Mr. Alpers of the New Jersey Association.

MR. WM. C. ALPERS: Mr. President, Ladies and Gentlemen of the Maryland Pharmaceutical Association: Although not an accredited delegate, I take great pleasure in conveying to you the greetings and best wishes of your sister association of New Jersey. The bonds of friendship that bind the pharmaceutical association of one State to that of another, are much stronger and firmer than is generally realized; for the aims that we all strive for and the difficulties that we contend with, are the same in every State, and naturally render our interests common and beget harmony and friendship between us. I therefore consider it not only a pleasure, but also a benefit to be allowed to meet with you, and I thank you heartily for the kind reception and hospitality that you have so cheerfully extended to me.

The State of Maryland occupies an enviable position among the States of the Union. Since the day that Lord Baltimore set foot on this hospitable shores, later through the trying times of the struggling colonies, during the desperate fight for independence, till to the present day, the sons of your State have manfully done their duty and stood in the foremost ranks gaining credit and glory for their homes.

The mountainous western part of your State abounds in ore and coal, and supplies food to the furnaces and factories in many States of the Union; the level eastern part is rich in agricultural products which are evident in rich pastures, flourishing orchards and waving fields of corn and grain; while the inexhaustible wealth of sea-food along the coast is too well known to need further mention. Your larger cities harbor many thriving factories whose tall

chimneys and furnaces with their never dying fires, bear testimony of your activity; at your wharves we see the flags of foreign nations that send their ships to you taking the products of your industry aboard and extolling you to all the world.

Equal to your commercial and industrial enterprises are the results of your educational efforts. The City of Baltimore contains one of the best known and respected educational institutions whose excellent appointments, high courses of instruction, liberal equipment and perfect staff of world-renowned instructors are surpassed by none and equalled by few similar schools. And if we draw the circle closer and come to that part of scientific education that interests us most, namely: the pharmaceutical, we again find you among the leaders. Your College of Pharmacy is everywhere favorably known, the teachers having gained prominence and popularity in many States besides their own. Among the pharmacists of your State, not a few have distinguished themselves in the councils of your associations, and you may justly be proud of the fact, that the Presidents of both our National Associations, the A. Ph. A. and N. A. R. D. are citizens of Baltimore.

The privilege of meeting with such a distinguished Association, to be permitted to partake in its deliberations and listen to its arguments, is therefore a just cause for thanks and I heartily express my full appreciation of this fact. I trust that your deliberations may be harmonious and beneficial and that you will succeed in solving or aiding to solve, the great problems that agitate the minds of all thoughtful pharmacists of the present. Let me close by expressing the hope that your brother pharmacists in New Jersey may some day be favored with a visit from some or all of you, when it will be our endeavor to reciprocate in full measure the friendship and hospitality that you have shown me to-day. (Applause.)

Prof. Caspari responded in a fitting manner.

THE SECRETARY: I have received the following communications:

Mr. C. H. Ware, Baltimore, Md.,

CINCINNATI, May 9th, 1899.

DEAR SIR:

The Lloyd Library is in need of the following numbers of your State Proceedings in order to complete our files: 1883, 1886 to

1894. Can you bring the matter before your members at the coming meeting? Probably some of them can complete the set which will be to the interest, both of the society and the library. Will you kindly have a resolution introduced placing the Lloyd Library on your complimentary list so that the proceedings may be intact hereafter?

Thanking you in advance, I am, sincerely yours,

JOHN URI LLOYD.

Communication from the National Association of Retail Druggists:

MR. SECRETARY:

Referring to the enclosed statement of account, I wish to direct the attention of the members of your association to Article VIII. of the Constitution of the National Association, which reads as follows:

"In providing funds, the Executive Committee shall assess the different associations on the basis of their membership, and no association shall be entitled to representation until its assessment shall have been paid; provided that State organizations shall be assessed for those members only who are not assessed in local organizations."

In this connection the attention of your members is directed also to the following extract from the proceedings of the St. Louis Convention (see page 20 of proceedings).

"Mr. Holliday of the Executive Committee spoke of the necessity, of providing funds to carry on the work of the association, and stated the results of the general survey of the sources of revenue from the data before his committee. Upon motion of Mr. F. D. Warner, of Indiana, the Executive Committee was authorized to make a per capita assessment of twenty-five cents per member upon all associations for the coming year."

In compliance with the above instructions, the following resolutions have been adopted:

"For the guidance of the Secretary and Treasurer of the organization, by the Executive Committee of the National Association of Retail Druggists, be it

Resolved, That the fiscal year shall begin on the first day of January and end on the 31st day of December of each calendar year.

Resolved, that the Secretary is authorized to make known the purport of this resolution to the several associations composing the national body, stating that the present fiscal year will end December 31, 1899, and directing these associations to govern themselves accordingly.

Resolved, that the Secretary is directed to inform the various associations affiliated with the N. A. R. D. that an assessment of twenty-five cents has been levied by the National Executive Committee upon each of its members, this information to be sent as soon after the passage of these resolutions as practicable."

The Executive Committee requests that expression be given here to their gratitude for the promptness with which the several associations composing the N. A. R. D. have supplied funds for the prosecution of their work, and that the suggestion be made to those organizations that have not found it convenient to remit their dues, that the work of the national body would be greatly assisted by their attention to this important matter at their earliest convenience.

Fraternally yours,

THOS. V. WOOTEN,
Secretary.

Received the following communication from the American Pharmaceutical Association:

*Fellow Officers, Members of the Council,
and other Prominent Members of the A. Ph. A.:*

Our worthy and active Ex-President Whitney is this year Chairman of the Committee on Membership.

He thinks our membership should be not less than 5,000. We agree with him. Mr. Whitney proposes to make a heroic effort in his new position to increase our membership. Let us all help him in this worthy cause. He and Mr. Kennedy are sending out broadcast circulars to stir up the Druggists of the country.

Shall we not take hold and give them a lift by a personal effort on the part of every one to bring in not less than three new members each at next year's meeting.

Find application enclosed. Please see that \$5.00 accompanies each paper when it shall be handed to Mr. Kennedy.

Yours fraternally,

CHARLES E. DOHME, *President.*

CHARLES CASPARI, JR., *Gen'l Sect'y.*

S. A. D. SHEPPARD *Treasurer.*

The following telegram was received from *Druggist Circular*:

OCEAN CITY, July 11, 1899.

To C. H. Ware, *The Plimhimon:*

Accept our compliments and best wishes for a profitable and interesting meeting.

THE DRUGGIST CIRCULAR.

Received the following communication from the American Pharmaceutical Association:

To the Members of the

Maryland State Pharmaceutical Association,

DEAR SIRS:

The American Pharmaceutical Association sends to each of you a Cordial and Fraternal Greeting:

At the Forty-sixth Annual Meeting of the Association the undersigned Chairman and Secretary of the Committee on Membership decided to make a special effort in the line of interesting a larger number and increasing the usefulness of the Association.

The Association now numbers nearly 2,000; there should be not less than 5,000 active working members. No association in any way connected with pharmacy, in this or any other country, gives to its members as much as this. The Annual published Proceedings, a volume of nearly 1,000 pages and sometimes more, contains matter of research, application, instruction and lucid explanation, and of such value and importance to every up-to-date pharmacist, that cannot be obtained elsewhere and that makes the volumes simply as a library of reference, not to mention its value as a book for study, that no progressive pharmacist can afford to be without.

Besides this Annual Volume, mailed free to every member once a year, the meetings of the Association are to each member, his wife or friends, who attend, an annual outing, which give a larger return in general culture, pharmaceutical, social and general education than can be secured in any other way by twice the amount in cost of time and money. Contact, consultation and consideration of varied or special matter, among and with such specialists, scientists or business men as may be desired, cannot be over estimated. The broadening and social influence, helpful and inspiring, always gives to the tired and over-worked pharmacist a peaceful, joyful rest, and a longer lease of life. It is the largest and most influential organization of its kind in the world.

Article I., Section 2, of the Constitution, reads: "To encourage such proper relations among Druggists, Pharmacists, Physicians, and the people at large, as may promote the public welfare, and tend to mutual strength and advantage."

Sec. 3. "To improve the science and art of Pharmacy by diffusing scientific knowledge among Apothecaries and Druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture in the several departments of the drug business."

Sec. 5. "To suppress empiricism, and to restrict the dispensing and sale of medicines to regularly educated Druggists and Apothecaries."

Sec. 6. "To uphold standards of authority in the Education, Theory and Practice of Pharmacy."

Chap. 7, Art. I. "Every retail druggist of good moral and professional standing, whether in business on his own account, retired from business, or employed by another, and those teachers of Pharmacy, Chemistry and Botany, who may be specially interested in Pharmacy and Materia Medica, who, after duly considering the objects of the Association and the obligations of the Constitution and By-Laws, subscribe to them, are eligible to membership; provided that no one, whose name has been dropped from the roll for non-payment of dues, shall be eligible for membership until payment has been made of the three years' dues for which he is in arrears."

Thus it will be seen all of you are entitled to membership, and we have placed in the hands of.....blank applications for membership. We not only cordially invite, but earnestly urge you to join with those who have, during the past forty-six years, enjoyed and profited by the work of this body, and you, by increasing the membership, will largely increase its power.

The Forty-seventh Annual Meeting will be held at Put-in Bay, Ohio, September 4th, 1899.

For the Committee,

H. M. WHITNEY, *Chairman.*

GEO. W. KENNEDY, *Secretary.*

The following communication was received from the National Association of Retail Druggists:

CHICAGO, July 8, 1899.

Mr. Chas. H. Ware, Secretary.

Maryland State Phar. Assn., Baltimore, Md.

DEAR SIR:

Referring to your favor of the 12th of June, I have sent to the local secretary of your organization a supply of literature to be used at your coming meeting. This matter was sent to Ocean City. If you will

kindly see that it is distributed to the best advantage your kindness will be appreciated.

I feel sure you, President Hynson and the other prominent members of your organization will see that our association receives the endorsement it deserves. Recent events have emphasized the salutary effect of organizing and maintaining a national association, the exclusive purpose of which is to conserve the financial interests of the retail trade. The fact that everything that has been desired has not been accomplished during the brief period of the existence of the N. A. R. D should not interfere in the least with the endorsement I have referred to. This thought is suggested by your letter.

While I feel it is almost unnecessary to do so, I would suggest the drawing up, previous to your meeting, of suitable resolutions to be passed by your association. This brings the matter before your members in the best possible way and is most likely to conduce to a favorable consideration of our claims. This suggestion is made because in a number of states where the feeling of the members of the association was undoubtedly strongly in our favor, the action taken has poorly reflected the sentiment of the membership, because attention to this matter had been neglected.

Hoping what is here written will be understood by you as prompted only by a desire to further the interests of the N. A. R. D., and wishing you a pleasant and profitable meeting, I remain,

Fraternally yours,

THOS. V. WOOTEN, *Secretary.*

Resolution received from the Proprietary Association of America :

NEW YORK, June 23rd, 1899.

DEAR SIR:

At the request of Mr. F. E. Holliday, Chairman of the Executive Committee of the National Association of Retail Druggists, I have the pleasure to send you herewith the Resolution which was unanimously adopted at the Seventeenth Annual Meeting of The Proprietary Association, held in New York, June 6th-9th, 1899:

"Resolved, at a meeting of the Proprietary Association of America, held in New York City, June 8th, 1899, That the members of this Association are in full sympathy, and are ready to co-operate with the National Association of Retail Druggists in their efforts to stop the cutting evil and require the jobber to confine his sales to the legitimate channels of trade, refusing all orders from department

stores and aggressive cutters, and further suggest as one means for accomplishing this end, that the National Association of Retail Druggists should require their members to discourage the sale of all substitutes for standard proprietary articles in every legitimate way. And that we require the National Association of Retail Druggists to notify the manufacturer of any jobber who violates his contract in this respect, with a view to removing him from the recognized list of jobbers."

I am, yours very truly,

JOSEPH LEEMING, *Secretary.*

I received the following communication from Dr. John F. Hancock :

BALTIMORE, July 11th, 1899.

*Secretary of the Maryland Pharmaceutical Association,
Ocean City, Md.,*

DEAR SIR:

Inclosed please find my reply to Query No. 2, which you will have read in my absence.

I find it impossible to leave home at this time much to my disappointment. I hope that you may have a large meeting and that the sessions of the Seventeenth Annual Meeting, Md. S. P. A. may be of unusual interest.

With best wishes, I am, Yours truly,

J. F. HANCOCK.

SECRETARY WARE: I have also received a letter from Edw. R. Squibb & Son, in reference to the full line of Acid Extracts, on exhibition in the corridor. The gentleman in charge of them will be pleased to answer any questions in regard to their superiority.

PRESIDENT MCKINNEY: The Secretary will now read the minutes of the Semi-Annual Meeting, held in Frederick.

Dr. DOHME: Those minutes are not correct in every particular and before being accepted, I would like to revise them.

So ordered.

SEMI-ANNUAL MEETING

OF

MARYLAND PHARMACEUTICAL ASSOCIATION,

CITY HOTEL, FREDERICK, Nov. 9th, 1899.

Called to order by President R. S. McKinney. A. L. Pearre was made Secretary, *Pro tem.* Mr. H. P. Hynson, made a verbal report of his visit to the meeting of the N. A. R. D., at St. Louis, and reported that he and Mr. Corning had pledged this Association for \$25.00 dues for organization purposes. This was accepted and passed on motion of Mr. Corning. Mr. Corning then reported his experience in aiding in the formation of the Baltimore Retailers' Association, a local organization as a branch of the N. A. R. D. He offered as a substitute for Mr. Hynson's motion, "Resolved that we as a body co-operate with the N. A. R. D. and send delegates to aforesaid N. A. R. D. Convention." Dr. Dohme spoke very forcibly in opposition to both Messrs. Hynson and Corning, stating that it is contrary to experience to expect success in either camp if the forces fighting for a common cause are divided in spirit and leadership. Both the Maryland State Pharmaceutical Association and the Baltimore Retail Druggists' Association would be hampered by their parallel but antagonistic course; neither would fully represent the drug interests of the State, and each would interfere with one another in increasing their membership and having the influence of a united trade body when endeavoring to obtain legislative favors at Annapolis. A divided house always has been known to fall, and I regret to know that the pharmaceutical interests of the State are now to be divided, for it will interfere with our efforts next winter to obtain the passage of the Pharmacy Law. The resolution was passed to co-operate with the N. A. R. D., and Mr. S. Schley's motion to pay the \$25.00 pledged by Mr. Hynson was also passed.

President was requested to instruct the Committee on Business to devote the major part of the Ocean City meeting to discussion of the war tax and other evils confronting the retail drug trade. Dr. Dohme moved that the services of an expert chemist be engaged by the Association at a fixed salary, and that the dues of the Association be raised to \$5.00 per year to meet this outlay, and that this motion be effective only if enough members be induced to join, to justify the expense. This would give a member of the Association more than full value of money paid, as the chemist would be at the service of members of the Association, and when Pure Food and Drug Laws are passed, it will be necessary to have goods tested in order to avoid arrest and possible trouble. The motion was seconded by Mr. Corning and passed. Dr. Dohme moved that this Association go on record as favoring the adoption by our government of the metric system as the official system

of weights and measures of the country. Carried. Dr. Dohme further moved that this Association go on record as apposing the granting of patents by our government on products, although fully favoring the patents on processes. Thus, phenacetine would not be patentable, but the process of manufacture would be. Any one discovering a new process would thus be enabled to also manufacture phenacetine, etc. Carried. Dr. Dohme moved that we go on record as favoring the repeal of Section 20, of the War Revenue bill, and as opposed to those proprietors who make the retailer pay the war tax. Carried. Dr. Dohme then also moved that the Secretary of the Association be instructed to send copies of these resolutions, typewritten and signed by the President and himself, to all the respective Committees and Members of Congress for whom they are intended. Before adjournment, Dr. Dohme again called attention to the inadvisability of the Baltimore Retailers' Association continuing to exist in opposition to and alongside of our old established and known State Pharmaceutical Association and that the two should be amalgamated, and of course be the Maryland Pharmaceutical Association, and on calling for a vote on the motion, it was carried—Messrs. Hynson and Corning alone voting in the negative. The vote stood, for the motion: McKinney, Dohme, Schley, Walts, Steiner, Keller and Pearre; against the motion: Hynson and Corning. At 11 P. M. the meeting adjourned.

A. L. PEARRE, *Secretary.*

VICE-PRESIDENT SCHRADER, (in the chair): President McKinney will now read his Annual Address.

MR. HYNSON: Before the President's message is read, I wish to say, that I know that a great deal of time has been spent in preparing this paper, and I am sure it will prove a valuable one, but before it is read, I think a committee should be appointed to read this message and report on it, as I am sure there are a great many things which should be acted on, which might be over-looked. I know of one President's address which was completely ignored, because the committee did not have the opportunity to report.

MR. POWELL: As so much has been said in regard to the President's address, I wish to say, that at the last meeting, at which time I had the pleasure of being President, I was compelled to read my address, after walking three miles across the country—

MR. HYNSON: Begging Mr. P's pardon for interrupting him, I wish to say that a number of the members indulged in a little poker game the night before the day in question, and some of those gentlemen who did, were the ones who walked—

MR. POWELL: If I am not mistaken, I think Mr. H. was one of the gentlemen who walked. (Laughter).

DR. DOHME: I think it would be acting disrespectful to President McKinney to refuse to listen to his address now.

MR. HYNSON: I do not mean any disrespect to our President, but as I have said, a great deal of time has been spent on this paper and I make this motion, in order that the committee may read it and report what is best to be done on the suggestions that he makes, and it will also allow us more time to discuss it properly. I want his paper to accomplish its object. Besides there are a great many members who have not yet arrived, who will probably be here to-morrow, and if it is read to-day, they will miss it. So I think it is best that we appoint this committee and let them report at to-morrow afternoon's meeting, after the President's address has been read.

DR. DOHME: I do not see why we should wait for every member before reading the President's address. All of the members have had a programme sent them, and they know the order of business, and if they miss the reading of the President's address, it is there fault, not ours. I think it best to continue the regular order of business and let the President read his address now.

PROF. CASPARI: To compromise matters, suppose we appoint a committee and let them read it and report on it to-morrow.

VICE-PRESIDENT SCHRADER: I appoint Mess. Corning, Hynson, Base and Caspary, on that committee to report on the President's Address.

MR. CORNING: I move that we adjourn until to-morrow morning at 9 o'clock.

DR. DOHME: I will second that motion, with the understanding that the reading of the President's message be the first order of business to-morrow morning.

MR. HYNSON: I second that motion.

PRESIDENT: Moved and seconded that we adjourn to meet here to-morrow at 9 o'clock A. M.

SECOND BUSINESS SESSION.

The second business session was called to order Wednesday, July 12th, at 10 A. M. President McKinney in the chair. The minutes of the previous session were read by the Secretary and approved.

President McKinney then called Vice-President Schrader to the chair and read his report :

PRESIDENT'S ADDRESS.

In the preamble to the Constitution of the Maryland State Pharmaceutical Association, we are told that among other things the object of the Association is to promote progress, guard the well-being of our profession and promote more harmonious business relations. To-day we have reached the seventeenth milestone of our existence as an Association, and it gives me pleasure to welcome so many of our members to the opening session of this meeting at Maryland's beautiful "City by the Sea." "Every rose," we are told, "has its thorn" and the pleasure of meeting you all here is not unmixed with regret—the regret of not seeing even more of our members present.

Last year when we met in the giddy heights of Blue Mountain, and an enjoyable meeting it was, in connection with our sister Association of Pennsylvania, our Country was in the throes of war with a foreign nation, for the benefit of humanity and the righting of wrongs. For several months afterward the interest in news from the field of strife occupied our attention largely to the exclusion of business and professional matters: But by the bravery of our Army and Navy and the gallantry of our leadars, both on sea and land, peace has again been established and we can once more settle down to work and scientific investigation. Many a Pharmacist laid down the pestle and spatula to take up the saber or gun in the defense of his Country and covered himself with glory. But those who went to the front are not the only heros. Every Druggist of the land showed his patriotism and is to-day still taking his prominent part in the victory of Manila, San Juan, El

Caney and Santiago, by attaching the miniature of "The Maine" to his wares through the Internal Revenue's licking and sticking process, inaugurated July 1st, 1898.

With the coming of peace and the consequent enlargement of our Country, new possibilities and new conditions have come to the Pharmacist. Many articles formerly looked upon as foreign productions are now products of our own Country. New fields have opened up for our trade and manufactures. New responsibilities face us. The land is open before us. Some have gone in to possess it. Let us all be alert and ready to make the most of the opportunities presenting themselves.

During the last year the Science of Pharmacy has marched steadily forward. Many new remedies and new methods have been introduced, of which our Committees will tell us. In the business interest of the Pharmacist, things have brightened, and notwithstanding some complaints, the financial side has improved.

Since our last meeting, Maryland has had the honor of being host to that distinguished body, the A. Ph. A., and an honor it certainly was. To say that our State and our Association were not benefited by that meeting would be to under estimate the usefulness and ability of the A. Ph. A. To say that the members did not heartily enjoy the meeting would be to discount their appreciative ability. To say they were not royally entertained, would cast an unjust accusation against the committees in charge and against the hospitality of our beloved Baltimore—the city of beautiful ladies and monuments.

It is my sincere desire that our State Association may profit by the meeting of the A. Ph. A. in our midst, and use the inspiration received to help make our meetings better, more interesting and more instructive. To this end I would suggest that all the time be not given to scientific matters, but that a judicious proportion be given to the consideration of the commercial side of the Druggist's life, a side that is of great importance to him.

One of the important matters before this Association for the coming year is a renewed effort for the passage of a Pharmacy Law. Today ours is the only State not having such a law. Indiana having during the past year succeeded in getting into line with a Pharmacy Law. Poor old Maryland—My Maryland—well might she take up the wail of the discouraged prophet of old: "I, even I only am left." Truly this is a lamentable state of affairs. As an Association I ask what are we going to do about it?

At its last meeting this Association decided to issue a Certificate of Competency, which, while it would have no legal standing, would

carry with it a moral weight that would be valuable to the holder. The Certificate was duly gotten up and ready for distribution. At the semi-annual meeting in Frederick, however, there arose such a difference of opinion in regard to the meaning of the Association and as to whom and under what circumstances the said Certificate is to be issued, that the Board of Trustees decided to await fuller instructions from the Association. We advise, therefore, some specific instruction at this meeting for the guidance of the coming Board of Trustees.

While the first semi-annual meeting of this Association, held in accordance with the resolution, adopted at last year's session, did not prove a glowing success. Yet I think it a good move and recommend the continuance of the same, hoping that its importance may dawn upon the members and that it may become a useful factor, in the administration of the affairs of the Association. The apparent lack of interest in that meeting may have been due in part to the unavoidable changing of the date, near the time of meeting. This year, I think, the semi-annual meeting should be of great benefit, in aiding Pharmaceutical Legislation.

One of the most important events in the commercial side of the Pharmacist's experience was the formation and meeting of the N. A. R. D. During the early part of the year, when the injustice of the Administration of the proposed Internal Revenue Act, to the retail Druggists became known, several movements were inaugurated to take action to correct this wrong. These movements finally merged into the N. A. R. D., whose purposes and ends have been so thoroughly discussed in the drug journals, that it is necessary for me to make only a passing mention of them. The action of the N. A. R. D. was of vast commercial value to the Pharmacists of the land and was the means of obtaining concessions and advantages that could never have been secured otherwise. Our State Association was represented at the meeting of the N. A. R. D.; has paid its proportion towards the expense of same and has passed a resolution to co-operate with that Association. This alone should be ample reason for every Druggist of Maryland to become a member of the State Association. Thus can he help to bear the burden and contribute to obtaining the advantages he enjoys. Should he refuse to do this Æsculapins himself, should blush to own him as a follower. This Association should continue to co-operate with the N. A. R. D., and should send representatives to their meetings.

Moreover, I think this Association should recommend to the Druggists in the several Counties of the State, that in addition to their being members of the State Association, they should form local organizations for purely commercial purposes and for co-operation with the

N. A. R. D. That the N. A. R. D. was of financial benefit, is proven by the number of circular letters received by every Druggist informing him that manufacturers had gone back to prices ruling before the stamp tax had been laid.

Another important occurrence since last we met was the second assembling of the National Pure Food and Drug Congress. Our Association was represented at this Congress and the report of the delegates will be heard later. Although the bill favored by the Congress, known as the Broscius Bill, failed to become a law, yet some advance was made along that line and no doubt by renewed efforts, in the near future, some legislation may be secured, that may be beneficial. I advise that this Association continue to have a committee on this subject; send delegates to the Congress at its next meeting and do all possible in the interest of a National Pure Food and Drug Law.

The Universal Cost Mark for copies of prescriptions as adopted by the Association last year, I think has proven satisfactory, at least speaking from a personal standpoint. I know it has been a benefit, and being a good thing, I think it well to push it along; therefore, if there are any Druggists in the State, either members of this Association or not, who have not procured this mark, I advise that they do so and use the same as intended.

At the Semi-Annual Meeting in Frederick, a revision of the U. S. patent laws was advocated and a resolution asking for such revision was passed. Owing to the small number of members present at that meeting, I think it wise that this matter be again talked over.

While Druggists as a class are loyal citizens and desire to show their patriotism by doing all that is possible for the support of our Country, yet in the matter of the present Revenue Stamp Tax, I think they are unjustly dealt with, and some action should be taken for the improvement of matters in this direction.

At the Semi-Annual Meeting a suggestion was made that this Association employ a competent chemist, at a given sum per year, and that his services be free to all members of the Association. While this no doubt would be a great advantage to many, yet on the whole, I do not think it a wise move to make at this time.

During the coming year the Committee on Revision of the U. S. P. will meet. Personally, I think this volume a very complete work, and the fewer changes made in it, the better. However, if the members of this Association have any suggestions to make, or any alterations to recommend, this meeting is the place it should be done.

I would suggest that all practicable means be used for extending the use of the Metric System of weights and measures.

It has been suggested to me that there is a movement on foot to establish a Druggist's Exchange for the purchase of Drugs and Medicines and to do away with the Jobber's profits. Of this I do not approve. Perhaps it would be an advantage to a few, but to the average rural Druggist, it would be an unwise move; his jobber is the best friend he has.

Since last we met the "Grim Reaper" has been at work among us. At least one of our members, has been called to his rest. In the removal of Mr. M. Joseph Muth, I feel that not only have I lost a warm personal friend, but that the Association also has lost a useful and honored member. While his voice, perhaps, was not frequently heard in our meetings, yet he had a great love for the profession and always had the good of the Association at heart. He was a man of ability; wise in judgement and prudent in council. I feel I should be remiss in my duty should I not give this small tribute to his memory. Would that each member of this Association, when his career is ended may be as well entitled to the plaudit "Well done".

One serious matter for complaint is the old cry of so small a membership and lack of interest shown. Personally, I promised last year to make an effort to get one more member before this meeting. I made the effort, but regret to say have not been successful, and I must say the excuses and rebuffs met with are rather discouraging. Why every Druggist of Maryland should not be a member of this Association is a matter beyond my comprehension. The Association has many advantages to offer and has during the last year, through its co-operation with the N. A. R. D., proved itself to be a financial benefit. This alone, not to mention the social features, should be enough to influence every self-respecting Druggist in the State to become a member of the Association. A serious drawback to the growth of the Association is the lack of interest on the part of the members, and their indifference to the success and welfare of the Association and its meetings. The unwillingness of the members to serve on Committees is a serious drawback, a hindrance to growth and an uncalled for burden on the Officers.

However, all things considered I think our Association to-day is at a higher standard than ever before. I hope she may continue to go forward and that each individual member may do his utmost to advance the interest of the Association and raise the standard of the profession.

I thank you for the honor conferred upon me in being selected as your President. I have endeavored to act for the best interests of the Association, and in serving you, feel that I have been benefited thereby. Wherein I have fallen short of doing what was best, I regret my failure and inability. For the future I desire to do all in my power to

help the Association on and hope the day is not far distant when the Maryland State Pharmaceutical Association will stand at the head of all such organizations, in doing noble work for the advancement of the profession.

ROBT. S. McKINNEY.

VICE-PRESIDENT SCHRADER: Gentlemen, you have heard the President's Address, what will you do with it?

MR. CORNING: I move that it be accepted and be referred to a committee appointed by the chair.

DR. DOHME: That committee was appointed yesterday.

PROF. CASPARI: It was not appointed. A committee unknown to the Association, was merely appointed to outline a report to facilitate the work, and Mr. Corning's motion is now in order.

DR. DOHME: I fail to see the distinction. As I understood it, the committee was appointed yesterday to save time.

MR. HYNSON: I offer as a substitute to Mr. Corning's motion, that the gentlemen on that committee be re-appointed.

Lost.

MR. CORNING: I move we reconsider the original motion.

Passed.

MR. CORNING: I now move we strike out of the minutes of last session, that part in regard to committee on President's address.

Passed.

MR. CORNING: I now move that the chair appoint a Committee on President's Address.

VICE-PRESIDENT SCHRADER: I appoint Mess. Hynson, Corning, Beck and Caspari on that Committee.

MR. HYNSON: I move that the Committee report at once.

The following report of the Committee was then read:

1st. The committee finds that the recommendation suggesting that the sessions of the Association be judiciously divided, between commercial and scientific matters, has been carried out by the former Executive Committee, and the Committee endorses and recommends that it be continued.

2nd. The committee endorses the recommendation of the President, regarding the *Certificate of Competency*, and advises that specific instructions be given the Board of Trustees relative to it.

3rd. The committee approves the recommendation relating to Semi-Annual Meetings and asks their continuance.

4th. The committee also agrees with the President, that the Association should continue to affiliate with the N. A. R. D., and should send delegates to its next annual meeting.

5th. Your committee heartily endorses the suggestion in reference to forming local organizations through the various Counties of the State, and ask that an effort be made in this direction.

6th. The President recommends that delegates be appointed to the next *Pure Food and Drug Congress*. This recommendation your committee also endorses.

7th. The committee approves the recommendation for the continuance of the *Price Mark* adopted by the Association.

8th. The President's recommendation in reference to the *Patent Laws*, your committee suggests that it should be brought to the attention of the Association for discussion.

9th. Your committee endorses the *Stamp Tax* recommendation and suggests that some action be taken in reference to the same.

10th. The President's reference to the death of our late member, Mr. M. Joseph Muth, the committee deems fit and proper, and recommends that a memorial page be set aside in the next Annual Proceedings, and that a committee be appointed to prepare matter for the same.

HY. P. HYNSON,
A. J. CORNING,
CHARLES CASPARI, JR..
JOHN G. BECK.

VICE-PRESIDENT: You have heard the report on the President's Address. What will you do with it?

MR. DE REEVES: I move that the report be accepted.

MR. CORNING: If this report is accepted, what assurance have we that its recommendations will be acted upon?

PROF. CASPARI: Mr. Corning is out of order. He is not as well versed in parliamentary law as he ought to be. We must accept the report first. I second Mr. De Reeves motion.

Passed.

MR. HYNSON: I move that the various recommendations of the report be taken up seriatim.

Passed.

MR. HYNSON: I move that the 1st recommendation be referred to the Executive Committee.

Passed.

MR. HYNSON: I moved that the 2nd be referred to Unfinished Business.

Passed.

MR. HYNSON: I move that the 3rd be referred to Executive Committee.

Passed.

MR. HYNSON: I move that the 4th be made the special order of business, after the report of Trade Interests.

Passed.

DR. DOHME: I move that the 5th section come up as Unfinished Business.

Passed.

That the 6th section be referred to the incoming President.

Passed.

That the 7th section be referred to the Committee on Trade Interests.

Passed.

That the 8th and 9th sections be brought up as Unfinished Business.

Passed.

That the 10th be adopted by a rising vote out of respect to our late member and valued friend. (All standing.)

Passed.

PRESIDENT MCKINNEY; We will now listen to the Secretary's report.

SECRETARY'S REPORT.

*Mr. President and Members of the
Maryland State Pharmaceutical Association,*

In submitting my second annual report allow me to thank you for the many courtesies I have received at your hands during a year in which my private affairs have many times compelled me to neglect those of the Association. While it is a pleasure to state that our Association is stronger in membership than it was last year, I regret to say, we have lost by death one of our oldest members, Mr. Joseph Muth, whose many sterling qualities endeared him to us all.

Thanks to our energetic Chairman of the Executive Committee, I had no trouble in obtaining sufficient advertisements to pay for publishing the Proceedings.

At the last Annual Meeting the "Universal Cost Mark" was adopted. After sending out 500 return postals, I was much gratified to receive over 250 replies from retail Druggists, who have pledged themselves to use it on copies of prescriptions.

Although delayed by the meeting of American Pharmaceutical Association meeting, which was held in Baltimore, the Proceedings were published three months earlier than usual so that every member had a copy early in January. Through the kindness of Mess. Muth Bros. & Co., in delivering them to the Baltimore Druggists, the Association saved considerable, as it cost 4 cents postage to mail each copy.

Copies of the Proceedings have been sent to the Secretaries of the various State Associations, and to the drug journals, who have reciprocated in like manner.

I submit the following account :

Proceedings of the

DISBURSEMENTS.

H. L. Litz & Co., (Printing Proceedings).....	\$152 00
Postage.....	14 00
Return Postals.....	10 00
Expense of Stenographer at Blue Mt. House	10 00

	\$186 00

RECEIPTS.

From advertisements in Proceedings.....	\$151 00
	CHAS. H. WARE.

PRESIDENT: You have heard the Secretary's report, what is your pleasure?

DR. DOHME: I move it be accepted.

Passed.

PRESIDENT: We will now listen to the Treasurer's report:

TREASURER'S REPORT.

In submitting his third annual report your treasurer shares the belief that, there be little need of giving other than the statistical figures directly incident to our finances. At the same time by others some explanation might be considered in order—indeed necessary—as to the management—possibly mismanagement—of the funds entrusted to our keeping. Especially may this the more be demanded, when, in the first place, that prodigious balance on hand, in the treasury July 1st, 1899, is proclaimed aloud as being \$1.85, and, in the second place, when it becomes generally known to our several members that, we were unable, in any degree, to contribute toward the social features of this, our yearly gathering, thereby rendering us solely dependent upon the liberality and magnanimity of generous friends. From such statements one's first impression might be that, either our treasury had been looted, or that the Association is about insolvent. But, paradoxical as it may seem, the figures will soon show—and these you know never lie—that we are to-day even in a more healthy condition financially than has been our fortune for many years. During the past twelve months we have handled, in the coming and going, one thousand dollars, consequently it is true that the income (\$500.00) would have amply sufficed for every necessity, as well as the luxury of entertainment, had it been

possible to so direct it. But the year has been an unusual one, so far as collateral demands are concerned—the like of which we hope not soon to be repeated—in the endeavor to further the supposed and hoped for interest of retail pharmacy, so to this end considerable has been devoted. At the close of our fiscal year, July 1st, 1898, we found several justly looking to the Association for reimbursement of moneys expended in the effort to have passed more general legislation. While the pharmacists of the State undertook and thought they could defray by subscription all expenses incident to passing a desirable pharmacy law, yet the amounts as subscribed against those turned over to our Legislative Committee were so at variance, (in one county being \$65.00, of which only \$30.00 were ever available), that finally the specific funds of the Association had to be drawn upon, in order to save our credit as well as individual losses.

The employed attorney, Mr. Sams, when at last approached by the speaker, shortly after our Pen-Mar meeting, seemed to think that quite \$75.00 were yet due him, since he had lost sight of one, out of three checks sent him, as well as a letter under his own signature accepting in full for all claims, then due, \$38.75, (not \$37.50, as was so much talked about at the meeting).

Again, Mr. Powell had taken much interest in the same legislation, and towards that expended \$28.75, beyond what he willingly contributed.

Again, Mr. Forman was extremely active in the same worthy cause, spending both time and money, and yet for all such, made claim for only \$25.00 in excess of his personal contribution.

Again, The National Association Retail Druggists, at its meeting of organization last fall, made requisition upon each State Association for \$25.00, and in that turn Maryland was not forgotten.

All four of these expenditures must be admitted, by every one, to be other than ordinary, hence not likely to occur often, at the same time we should be most happy in the fact, that it has been possible to meet and pay every dollar of this indebtedness. The sum-total of these was \$117.50, and of this amount \$92.50 was paid from last year's receipts, while for the final \$25.00 we were enabled to send a check several days ago, from the annual dues of the present year (July 1st, 1899 to July 1st, 1900) collected since the first of the month.

While it is true that, we have a membership of 143, yet it is a fact that scarcely an even hundred can be counted as being in good and permanent standing. To every member a bill was mailed on July 1st, 1898, and those failing to respond in the interim had duplicates sent them January 1st, 1899. Of the entire number only 93 have been substantially heard from, yielding thereby, from initiation fees and annual

dues, \$246.00, while the remainder of our income, about an equal amount, has been derived from the advertisements in our Annual Proceedings. The amount from this latter source may seem large, but this was occasioned by the lateness in issuing the fifteenth volume and the early publication of the sixteenth, by which the collection for both sets of advertisements became possible, to a considerable extent, within the one fiscal year.

In order to have a guide for the future, my observation leads to the belief that by exercising proper care we can invariably depend on about \$225.00 annually, from our members in initiation fees and yearly dues, and of this at least \$100.00 will be needed for circulars, invitations, postage and helping the Proceedings beyond the amount controlled from advertisements, thus leaving \$125.00 for whatever purposes the Association may think wise and best.

The following enumerates the monthly receipts and itemized disbursements:

RECEIPTS.

1898—June.....	\$ 99 36
July.....	124 00
Angust.....	32 00
September.....	7 00
October.....	4 00
November.....	11 00
December.....	3 00
1899—January.....	180 00
February.....	20 00
March.....	2 00
April.....	12 00
May.....	2 00
June.....	2 00
	————— \$498 36

DISBURSEMENTS.

1898—June 23....William C. Powell	\$19 61
23....Charles H. Ware	10 00
27....Charles H. Ware	2 00
July 1....Stamps.....	3 00
9....H. L. Litz & Co.....	25 00
9....E. H. Cole.....	12 00
12....E. L. Torsch.....	5 20
12....J. P. Shannon.....	33 00
16....H. L. Litz & Co.....	49 40
25....Sams & Johnston.....	38 75
Aug. 6....A. R. L. Dohme.....	5 20

8....C. H. Waller.....	5 00
Sept. 3....J. Webb Foster.....	6 00
6....Sun Advertisement.....	10 50
Nov. 5....H. L. Litz & Co.....	7 00
17....John W. Lowe	25 00
26....Charles H. Ware.....	10 00
Dec. 31....Stamps	3 00
1899—Jan. 2....Charles H. Ware	12 00
9....H. L. Litz & Co.....	75 00
27....H. L. Litz & Co.....	30 00
31....C. W. Schneidereith	9 25
Feb. 25....H. L. Litz & Co.....	25 00
Mar. 9....H. L. Litz & Co.....	41 00
May 8....Wm. C. Powell	28 75
June 28....F. A. James (Printing)....	2 85
29....Stamps.....	3 00
	—————
	\$496 51
July 1....Balance	1 85
	—————
	\$498 36

It may be of interest to some of you, at least, to know the extent of indebtedness of the fifty members not heard from during the past year. Of course so far as this report goes, every member owes for the present year (July 1st, 1899 to July 1st, 1900), but in addition to this revenue we have upon our ledger, in back dues, the goodly sum of \$161.00, distributed as follows: 27 in arrears for last year only (\$2.00 each)—\$54.00; 11 for the past two years (\$4.00 each)—\$44.00; 9 for the past two years plus their initiation fee (\$5.00 each)—\$45.00; 3 for the past three years (\$6.00 each)—\$18.00.

There is also \$10.00 yet to be collected for advertisements in our last Proceedings.

In conclusion your treasurer begs to recall your attention to the fact that, he one year ago kindly asked the Association not to consider him again in connection with any office, and he now emplores the same favor.

While for three years he has conscientiously discharged the duties of his present office consistent with his best judgment, and that at not a little sacrifice of time which could and should have been devoted to other avenues, yielding him profit and remuneration, yet, realizing himself an humble member of the Association, he felt it a duty to carry his share of the organization's burden. That now having been done to a considerable degree, he truly believes it will be an imposi-

tion to exact more of him, and therefore, in this form wishes to give such expression to his sincere convictions, in the hope that you will deal justice out to all, and not suffer his pleasure to go unheeded.

DAVID M. R. CULBRETH, M. D.

PRESIDENT: You have heard the Treasurer's report, what will you do with it?

MR. HYNSON: I move the last page be stricken out and the rest accepted.

MR. CORNING: I move that a vote of thanks be given Dr. Culbreth and his report be referred to an Auditing Committee.

Passed.

PRESIDENT: I appoint Mess. Base, Wiesel and Foster as an Auditing Committee.

MR. HYNSON: I move that the President now appoint a Nominating Committee, which shall also report on time and place of next meeting.

Passed.

PRESIDENT: I appoint Mess. Hynson, Culbreth and Powell.

PRESIDENT: We will now hear the Executive Committee's report, by Dr. Alfred R. L. Dohme:

REPORT OF THE EXECUTIVE COMMITTEE,
FOR THE YEAR 1898-1899.

The province of this committee not being definitely stated, a report of its work must necessarily be more or less disconnected. The work of increasing the membership was not as successful as last year, unfortunately, due to the springing into existence of a sister organization, the Baltimore Retail Druggists' Association, which with a definite object in view of eliminating the cutter and restoring full prices, naturally attracted the attention of Druggists and withdrew it from our Association. Hence we have added to our membership since our last meeting only fifteen members, as follows: F. M. Blaney, G. A. Thompson, H. Q. McElwee, C. L. Meyer, John I. Kelly, A. J. G. Raiber, H. C. Winkel-

mann, of Baltimore; J. Heisely Keller, of Frederick; E. Riall White, of Salisbury; C. E. Collins, of Crisfield; Dr. A. G. Horine, of Brunswick; W. E. Brown, of Baltimore; O. C. Smith, of Baltimore; Dr. H. Jarvis, of Elkridge; E. R. Downes, of Baltimore.

In accordance with a resolution passed at the last meeting there was held on December 2nd, 1898 (?) at Frederick, the semi annual meeting of this Association and although not very well attended, some good work was done. There were present from Baltimore, Messrs. H. P. Hynson, A. J. Corning and A. R. L. Dohme; from Hagerstown, Mr. C. C. Walts, and from Frederick, Messrs. Steiner Schley, A. L. Pearre, H. R. Steiner, and J. H. Keller.

It was decided to pay \$25.00 pledged by the delegation to the N. A. R. D., and to instruct Committee on Business to devote next meeting to discussion of war tax and the cut rate evil. To go on record as favoring the adoption of the metric system, as the official weight and measure system of the Country; as favoring repeal of the war tax, as it is a great hardship on the Druggist; to engage services of expert chemist at a salary of \$750.00 to \$1,000.00, to make analyses for members gratis, and increase dues to \$5.00 to meet the expense.

In accordance with the resolution adopted at the last meeting, it was decided to issue Certificates of Proficiency in Pharmacy and supply them to such Druggists as desired them by payment of \$1.00, the intention being to thus establish in a measure a State Pharmacy Board in the absence of a State Pharmacy Law, and by having applicants accepted by the Trustees of this Association and obtain one of said Certificates, it would give him a standing in the State which would be of some service to the pharmacists thereof in the absence of more definite knowledge as to the applicant's ability and character. Your Executive Committee has these Certificates on hand, and so far no Pharmacist, Graduate or Clerk has applied for one. They are at your service, and being paid for, we hope you will make some arrangement to dispose of them, either with or without the dollar. As our senior senator from Charles Street is responsible for their existence, it would no doubt be in order to hear from him in reference to them when the matter comes up for consideration.

At Frederick, your chairman of the Executive Committee endeavored to get the Baltimore Retail Druggists' Association and our Association to join hands and fight for a common end together, rather than have two representative organizations in the State, and thus naturally divide the interest and in consequence the influence, and in a measure value of each. But although this was the sentiment of the Frederick meeting expressed in the form of a vote, it was not to prevail, as the Retailers' Association not only continued to exist, but grew, and

has been continuing to grow ever since. Being a branch of a National body and being more or less hence under its dominion it could not very well be amalgamated with our Association.

As the work and interest in pharmacy this year has been more or less centered upon the aforesaid Retailers' Association, but little has come up for your Committee to act upon, and as the legislature did not meet the past winter, the interest attaching to the same was also absent. The legislature will however meet next winter, and we trust that at this meeting some well defined line of action will be mapped out, and one that will include in its scope not only the legislative committee but also every member of the Association. Let it become the duty of every member to do a certain work towards influencing legislation at Annapolis, and let this work be done systematically and continually. We can begin now in many cases where we know who will be the candidates, getting their pledged support return for our working for their election. One of our members is to the candidate from Baltimore County—Dr. Geo. W. Truitt, of Roland Park, and we should like to hear at this meeting from him, and what are his views as to how we can best make our work tell, dating the inception of the same from the present movement.

The Proceedings have again been self-sustaining, your Committee having again induced sufficient advertisers to favor us to pay for the publication. Thanks to the efficiency and energy of our Secretary, we have this year gotten out our Proceedings before the end of the year, and not as heretofore just prior to our next Annual Meeting. We ought to be proud of our Proceedings, not only because they are creditably gotten out, and give us a correct account of our delightful meeting with our brethren from Pennsylvania up in the Blue Ridge Mountains, but also because they contain matter of value and interest to the pharmacist at large all over the land.

There is no doubt that our Association can be made as all State Associations should, a valuable adjunct to the National Association, and the National Pharmacopœia Committee of Revision. Our members can do good work for the cause of scientific pharmacy as well as for the solution of the cut rate evil, and I stand here to-day to say that no matter how valuable the restoration of full prices may be to the profession, it is secondary in its ultimate aim and end to the advancement and betterment of the science we all love and for the advancement and betterment of which we should all strive. No one is more desirous than myself that full prices should again prevail, and the department store evil be eliminated, but we should not forget that the aim of pharmacy is not only to make money; there is a higher aim I take it than this, for pharmacy is a science and a noble science, and her devotees should be her own faithful and dutiful sons. Let the good

work of advancing her status and her standing emanate from her own flesh and blood, and let her loving sons devote their energies to raising for her a pedestal that will give her an elevated and prominent position among her sister sciences. The program of the present meeting will we trust meet with general approval and result in a successful and enjoyable meeting. By introducing ample entertainment into the program and giving the busy Pharmacist and his fair ladies ample opportunity to have some recreation and fun, we hope we have struck a sympathetic chord among all our members. We think these meetings should be not merely humdrom business meetings, for we all have ample of that sort of thing all the year around, but should rather be informal and more on merriment bent.

While our Treasurer's report shows no great balance in our favor, we are not in debt, and can look forward to the coming year without hesitation and fear of financial disaster. Your Committee had a proposition from a New York firm to print our program and proceedings gratis for us in return for the advertising perquisites of the same, but decided not to accept the same, inasmuch as we preferred to paddle our own canoe, and our Proceedings were not a matter of expense to us.

Your Committee decided to refer the matter of the engagement of the chemist to this general meeting of the Association and will bring it up under the head of New Business. We believe it is as desirable for the Pharmacist and as renumerative, when he faces of a National Pure Food and Drug Law, as it will be advantageous to this Association in enlarging it, membership and giving it coherence among its members and "something to join for."

As the Convention to elect a Committee of Revision of the U. S. P. will meet next May before our next meeting, it is necessary for us to appoint three delegates and three alternates to the same at this meeting and this should come up under the head of New Business and should be carefully considered before hand by you all. We should be represented by men who will attend the meetings and will do the Association credit.

Respectfully submitted,

A. R. L. DOHME, Ph. D., *Chairman.*
W. C. POWELL,
J. WEBB FOSTER.

PRESIDENT: You have heard the report of the Executive Committee, what is the will of the Association in regard to it?

MR. DE REEVES: I move it be accepted.

Passed.

PRESIDENT: The suggestions made in the report will be acted on at the proper time.

PRESIDENT: The Chairman of the Legislative Committee, Mr. Forman, being absent, there has been no report presented. Mr. De Reeves is a member of that Committee, possibly he has a report to make?

MR. DE REEVES: I have nothing to add to the report of last year. The Committee did all in their power to pass a Pharmacy Law. I do not think the Association is under any obligation to Mr. Sams. I think he was well paid, as he did not make any great effort. I must say though, that Mr. Forman was very energetic and worked hard, and if there is any credit due, he should have it.

DR. CULBRETH: Mr. De Reeves seems to have forgotten himself. He must have some pull.

MR. HYNSON: I will take the liberty of answering for Mr. De Reeves, and say that he is an Eastern Shore man, and they always have a pull. But the people must be educated to the necessity of a Pharmacy Law, and this work must always be attended to by the Pharmacy Committee.

PRESIDENT: The next thing in order is the report of the Committee on Pharmacy:

REPORT OF THE PHARMACY COMMITTEE
FOR THE YEAR 1898-1899.

This report naturally is more interesting to the reader than to the listener for much of its substance is disconnected and bristles with facts, figures and formulas. I will hence try to make it as brief as possible, and ask you to patiently listen while I endeavor to make it interesting.

The usual activity in pharmaceutical research has been made manifest all over the world, and much of scientific value has been done

resulting in adding facts to our storehouse of knowledge. As previously stated; several drugs have been brought out from the jungle and dissected by the investigator, with his knife, microscope, test tube, soxhlet and other implements.

Our knowledge of alkaloids has progressed favorably, and the usual number of synthetic products has been precipitated into existence after first being architectured on paper and then atomically constructed in strict accordance with the plans. Every year sees more and more, and better and better work being done on this side of the Atlantic, and although the sages on the other side do not look with favor upon the advent of the same, the good work and progress, as in commerce and manufacture, goes on and leaves its ineffaceable mark.

Richard Fisher found that squaw vine did not contain any hydrocyanic acid as has been claimed. Kremers and James found that the presence of methyl salicylate is not a criterion for genuine senega root as the false senegas also contain it. W. A. H. Naylor, claims to have extracted two alkaloids, betaine and cascarilline, from cascarilla bark. Langmuir has found that commercial glycerins contain varying amounts of arsenic from none to 0.01 per cent. Prescott with several of his students has been carefully studying the use of iodopotassium iodine, i. e., a solution of iodine in potassium iodide of known strength, in assaying various drugs as for instance, Nux Vomica, Belladonna, Opium for Morphine, Golden Seal for hydrastine and berberine, Ipecac, etc.

It has been found that two or more periodides are formed according to whether the iodine solution is added to the alkaloidal solution or vice versa. While not perfected on account of the fact that all the periodides of all the alkaloids have not been analyzed, and it is not definitely decided that the same periodide is always found, the method promises to be valuable. Prescott and Hess have worked out a method of determining if a vanilla extract contains any vanillin or coumarin. They state that an extract containing these can no longer be called extract of vanilla. This appears to the writer to be another case of anti-synthetic prejudice. If vanillin is the active principle of vanilla, and it is pure, there can exist no reason why it should not be used instead of the bean, if it gives the same result as a flavor. Of course such an extract should not be labelled U. S. P., but certainly no law or reason exists why such extracts cannot be made, as there is nothing deleterious in them by reason of the vanillin or coumarin used. It is of value to have a new method of discovering them and thus knowing what we are getting and buying.

Dr. Squibb has introduced his method of using acetic acid in place of alcohol in the extraction of drugs for making fluid extracts. He concludes from experiments made that he saves half the cost of grind-

ing and 5-6 cost of menstruum. His resulting acettracts are free of alcohol, but have a very peculiar acetic odor which masks the true odor of the drug or modifies it to being barely recognizable. For some drugs it may be desirable, but certainly not for all or even many. The great trouble is the incompatibility of prescriptions that must result on account of the lack of alcohol when the original was filled with an alcoholic extract, and the disturbing influence of the acetic acid which is bound to be present in more or less amount, and effect the other ingredients of the prescription.

Ladd has compared Peligot's, Crosschoff's, Vite's and Gomberg's methods of estimating Caffeine, and finds that Gomberg's is not only simpler and more rapid, but yields much higher results. Dr. Squibb suggests an improvement in the assay of Nux Vomica by the U. S. P. process, consisting of the use of equal volumes of chloroform and absolute ether instead of pure chloroform, as it avoids the troublesome emulsions.

Tieman has shown the very remarkable relation of citral, the active principle of lemon oil, to many other essential oils and how it is an aldehyde and the product of oxidation of various alcohols which are themselves the active principles of the essential oils, such as rose, bergamot, ylang ylang, lavender and violet. Fromm has shown that oil of savin contains three fractions as distillates: 1st, containing Pinene and going over under 195 degrees C, and 2nd, containing the esters of an alcohol Sabinol $C_{10} H_{18} OH$ and going over between 195 and 235 degrees C; 3rd, containing Cadinene and going over between 235 and 310 degrees C. The two esters (acetic and an acid boiling at 247 degrees C, and not yet determined) are what characterize this oil and probably give it its virtues.

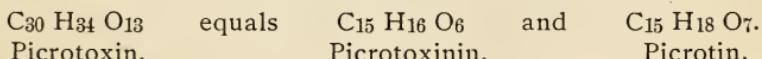
Thoms and Wentzel have shown that the so-called alkaloid "mandragorine" obtained from *atropa mandragora* is hyoscyamine. Kiliani has determined the formulas of digitoxin and digitalin, the two active glucosides of *Digitalis*, and also of the products that they are split up into on being hydrolyzed, viz: Digitoxin $C_{34} H_{54} O$ and $H_2 O$ equivalent to $C_{22} H_{32} O_4$ (Digitonigenin) and $2C_6 H_{12} O_4$ (Digitoxose a sugar) Digitalin— $C_{35} H_{56} O_{14}$ equivalent to $C_{22} H_{30} O_3$ (Digitaligenin) and $C_7 H_{14} O_5$ (Digitalose a sugar) and $C_6 H_{12} O_6$ (a glucose).

Ladenburg has found that Ozone is insoluble in water and that its density is $1\frac{1}{2}$ times that of oxygen, i. e., that it contains three oxygen atoms. He started from liquid air which had been ozonized, and then obtained liquid ozone which was a black-blue non transparent liquid.

Einhorn and Willstaetter have shown that atropine and cocaine are related substances inasmuch as both are derived from tropine, atro-

pine being tropine tropate, and cocaine methyl-benzoyl—tropine carbonate. The Commission on atomic weight revision reported that it has been decided to make oxygen the basis of all the other figures O equal to 16,000 whence hydrogen is 1.01, carbon 12.00, Nitrogen 14.01, etc.

Meyer and Bruger have shown that picrotoxin the active principle of fishberries (*Cocculus Indicus*) is not a chemical substance, but a mixture of two chemical substances, viz: picrotoxinin, picrotin, and that these are present in the picrotoxin in varying quantities—

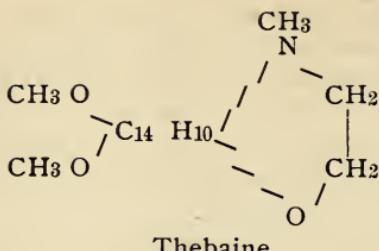


They obtained both of these in quantity and made numerous derivatives of each. Picrotoxinin crystallizes well, is soluble in all solvents and melts at 200 degrees C. Picrotin crystallizes beautifully in white needles from water and melts at 250 degrees C. Which of the two is the active principle, or if both are, has not been decided.

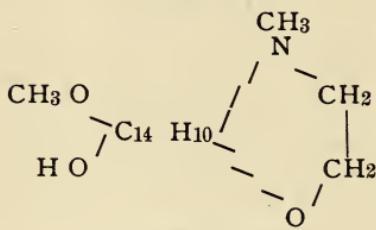
Ramsay has discovered several new constituents of the atmosphere which he considers to be elements, most likely they are krypton, probable atomic weight 45, neon atomic weight probably 20, metargon atomic weight undetermined, and xenon the heaviest of all, has atomic weight probably of 32. These gases all have distinct spectral line groupings and the ratio of their specific heats is in all cases 1.66 which indicates that they are elements. This work was made possible by the advent of liquid air by means of which these gases can be obtained in quantity at considerable saving in labor, time and expense.

Erlwein and Weyl have found a reaction to determine ozone in the presence of nitrous acid and hydrogen dioxide. The reaction is a color formation resulting from the action of the Ozone on meta phenylenediamine hydrochloride. The color is a deep Burgundy red and the reaction may be made as follows: Take 25 cc. of solution of 0.2 gramme metaphenylenediamine hydrochloride in 90 cc. water and 10 cc. caustic soda solution 5% and pass the air to be examined through it. Colorless at first, it will turn red if ozone is present, the other gases not affecting the solution.

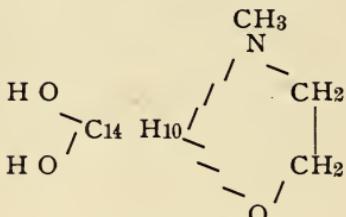
Freund has worked it out after two years' close study and experimenting the constitutional formula of Thebaine one of the minor Opium alkaloids and shown its relations to morphine and codeine as follows:



Thebaine.



Codeine.



Morphine.

Every step to reach this conclusion required months of work and resulted in the formation of dozens upon dozens of new compounds and derivatives of thebaine. Knorr, the discoverer of antipyrine, has been working for 10 years on Morphine, and has also practically settled its constitution, and the beauty of it is that his conclusions and Freund's both harmonize perfectly, although starting from different premises. Both as well as codeine are derivatives of the hydrocarbon phenanthrene.

Varley, a Frenchman, has stated that the active principle of Jasmin oil is phenylglykolmethylenacetol, but Heine and Miller have shown that this is not even present in the oil, but this like most essential oils owes its odor to a series of esters, and found it to contain approximately 65% benzylacetate, 7.5% linalylacetate, 6% benzylalesbol, 5.5% as yet undetermined odoriferous substances and about 16% linalool and other substances.

Freund and Schwarz have examined Cevadine sold by Merck as "veratrinum purissimum" and probably the active principle of verat-

rum viride. Composition is $C_{32}H_{49}NO_9$ —M. P. 205 degrees C. and splits upon saponification with alcoholic potash into angelic acid and cevine $C_{27}H_{43}NO_8$ which crystallizes nicely from dilute alcohol. Cevadine is eminently toxic, acting as local irritant and ultimately causing death by paralysis of breathing muscles and resulting dyspnoe. Cevine acts similarly but not so powerfully. Neither have antipyretic properties.

Tieman has found that Lemongrass oil contains as much as 73—82% of citral the lemonous constituent of lemon oil, and further that this substance has been found to exist in the following oils: lemongrass, lemon, limette, mandarin, backhausia, eucalyptus, steigeriana, citronella, Japanese pepper, bay, sweet orange and melissa.

Lemongrass oil contains besides citral, several terpene alcohols notably geraniol, lævo-linalool and lævo-terpineol and it has been used by the firm of Schimmel & Co. as a source of geraniol, which is one of the main constituents of oil of rose, together with citronellol, another terpene alcohol.

Ciamician and Silber have examined galangol root and obtained from it three crystalline substances: (1) Campferid in large glistening golden needles (m. p. 138 degrees C) and two other yellow crystallize substance, neither of which latter, they have ever as yet examined carefully. Biltz has examined the oil of *origanum majorana* and found that 2-5 consists of terpenes mainly terpinene and of the remaining 3-5 the main constituent is dextrogyre terpineol, besides some esters among whose acids is acetic.

Fleischer has obtained the coloring matter of *digitalis* in the form of a substance he has named digitoflavan crystallizing in yellow needles (m. p. 320 degrees C) and which is obtained by extracting the leaves with ether which removes the digitoxin and with it the digitoflavan which can be separated from the former by chloroform in which it is very difficultly soluble, while digitoxin is easily soluble. It is a tri-acid phenol, and he has determined its constitutional formula. Its Empirical formula is $C_{15}H_{10}O_6$.

E. H. Erdmann have found that the odoriferous principle of oil of neroli or orange blossoms is the methyl ester of anthranilic acid which is orthoamido-benzoic acid. It does not contain much of it, but has a powerful odor. Curiously enough the ethyl ester does not possess scarcely any odor. This is probably the first instance of a nitrogenous body, being found to be the odoriferous principle of an essential oil.

Ahrens has obtained a fifth alkaloid from stavesacre seed and named it "staphisagrine." The other four alkaloids are delphinine $C_{22}H_{35}NO_6$, delphinoidine $C_{42}H_{68}N_2O_7$, delphisine $C_{27}H_{46}N_2O_4$ and

staphisagrine. The staphisagrine is an amorphous white powder (m. p. 275 degrees C) and has the formula $C_{20}H_{24}NO_4$. Ammonia splits it up into another alkaloid melting at 185 degrees C. and being a brownish amorphous powder formula $C_{20}H_{20}NO_2$, he has also named this staphisagroidine.

Baldwin has called attention to the poisonous action of sodium fluoride, which is being now largely used as an insecticide and put up in tin cans resembling baking powder boxes. It has been used instead of baking powder by mistake in making pancakes. In five minutes vomiting and purging followed, and then the patient felt better and continued at his work all day. In the evening he died, practically without medical attention and suddenly.

Nagelvoort has shown that Java Quinine Sulphate made at the Bandaeng factory on the Island of Java, is an exceptionally pure and fine article of this drug. Marini has found that Golden Seal is a safer and surer anti-hemorrhagic than ergot, notably in all stages of labor. Kleber has examined oil of sassafras bark and found that it consists of safrol 8%, pinene and phellandrene 10%, dextro-camphor 6.8%, eugenol 0.5% and codinene 2.7%. The oil of sassafras leaves is quite different and contains mainly citral, the lemonous principle; geraniol, one of the odoriferous constituents of rose oil and citronella oil; linalool, one of the active principles of bergamot and lavender, and usual solvents of these principles to make the oils, viz: pinene and phellandrene. Falkenheimer has shown that the crystalline odoriferous principle of liatris odoratis—sime or deer's tongue is coumarin and not vanillin.

Prescott and Gordin have worked out a method of assay for golden seal, nux vomica, opium, ipecac, etc., that is based on the formation of periodides of the alkaloids of the drugs which are titrated with a standard iodine solution and the excess titrated with sodium thiosulphate. Knowing the composition of the periodide and that it is a definite substance and always formed, the process is quite a good and safe one. For hydrastine and berberine it appears to work very well. Until positive assurance is at hand, though, that one definite periodide can be formed under the conditions of the assay of the particular alkaloid in question, the process cannot be accepted for that alkaloid or the drug that contains it. They have obtained 2.3% hydrastine and 2.5% berberine from various samples of golden seal root. It is quite remarkable that when this process is applied on a large scale to obtain these alkaloids from the golden seal, the 2% invariably dwindles to 1%, no matter how carefully the process is carried out.

Puckner has examined the Belladonna Leaves and fluid extracts of same, of the market, and finds that of 20 samples of leaves examined the

the alkaloidal content varied between 0.01 and 0.51% and that those fluid extracts of which manufacturers claimed a standard of 0.35%, every one gave him that amount, while those that claimed no assay or claimed 0.4% by weight, all fell far below the standard of 0.35%. He had found that pretty large green leaves are poor in alkaloids and less handsome leaves with capsules mixed among them are the richest. He recommends 0.35% as a good standard, and says that all leaves found to be richer than this should be mixed with weaker leaves, to reduce them to this standard. He also recommends the Keller method of assay.

Prescott and Gordin report an improved assay process for opium, which admits of either alkalimetric or iodometric titration, the one to check the other. They have found that the U. S. P. process does not extract all the morphine and that either of the volumetric processes give higher percentages of morphine.

Tschirch has continued his work on the chemistry of resins and plant sections as follows: *Gum Elemic* contains Elemic Acid $C_{35} H_{46} O_4$ as a resin acid and amyrin $C_{25} H_{42} O$ and Bryoidin $C_{20} H_{38} O_3$ as resenes or resin bases; and dipentrene and phellandrene as ethereal oils. *Gum Dammar* contains dammarolic acid $C_{56} H_{80} O_8$ as resin acid, and Resene $C_{11} H_{17} O$ and B-Resene $C_{31} H_{52} O$ as resenes. *Gum Mastic* contains masticinic acid $C_{20} H_{32} O_2$ as resin acid, masticin $C_{20} H_{32} O$ as resene and pinene as ethereal oil. *Gum Myrrh* contains $C_{13} H_{16} O_8$ and $C_{26} H_{32} O_9$ as dibasic resin acids, $C_{26} H_{34} O_5$ as resene, $C_{10} H_{14} O$ as ethereal oil and $C_6 H_{10} O_5$ (59%) as gum. *Gum Olibanum* contains Boswellenic acid $C_{32} H_{52} O_4$ as resin acid, olibanoresene $C_{14} H_{22} O$ as resene, Pinene, Phellandrene and Cadinene as ethereal oils, Arabinic Acid $C_6 H_{10} O_5$ as gum. *Gum Opopanax* contains chironolic acid $C_{28} H_{48} O_4$ as resin acid and Panox resene $C_{32} H_{54} O_4$ and B-Panox resene $C_{32} H_{52} O_5$ as resenes and pararesins, tannol as resin alcohol.

Simhold isolated from Iceland Moss, lichesterinic acid $C_{19} H_{32} O_4$ in crystals and made salts and derivatives of it. The same author also examined about 50 varieties of cigars and cigarettes and smoking tobacco as to the nicotine content of the same. He finds that they vary between 0.972 and 2.957% nicotine for cigars, 0.801-2.887% for cigarettes and 0.518-0.854% for smoking tobacco. He further finds that the strength of a cigar is entirely independent of the nicotine content, for those marked strongest, contained as a rule, the least nicotine. The fermentation process is what develops the flavor and the strength of the tobacco, and that the ferments or enzymes that produce the favorite Havana flavor, can be imported from Cuba and used to advantage in making Havana out of American or German tobacco. It may be of interest to remark here that Dr. Oscar Loew of Germany has

been engaged by the United States government to make a thorough study of the fermentation or processing of tobacco and is now busily engaged at his work. It is hoped to learn what ferments and conditions produce certain flavors in tobacco and to be able to produce the Havana flavor from any tobacco.

Kats has examined the fatty oil of malefern root and found that it consists of the glycerides of oleic, palmitic and cerotic acids, i. e., Olein 95% and palmitin and cerotin together 5%.

Troeger and Feldmann examined oil of cade and strange to say found that it contained practically no cadinene, but only an inactive sesqui terpene $C_{15} H_{24}$. Kunz-Krause has examined Pichi, (*Fabiana Imbricata*) (Ruiz and Pavon) and found (1) that it contains no alkaloid, but considerable magnesium phosphat. The leaves also contain a soft resin which is the active principle, and contain several substances in accordance with Tschirch's experience with resins: First, an ethereal oil boiling at 275 degrees C. and turning intensely red with alkalies and possessing a camphor-mint like odor. He calls it Fabinol and its formula is $C_{54} H_{90} O_4$; second, a resene fabiana-resene $C_{54} H_{90} O_6$ which is probably a complex derivative of vinyl-pyro-catechin. It crystallizes from hot alcohol in snow white granular microprisms and melts at 280 degrees C. and can be sublimed; third, fabiana glycotannoid, a light yellow granular powder melting at 80 degrees C. which splits up into methoxy-dioxy-cumarinic acid (which in turn is converted into chrysatropic acid) and a sugar; fourth, cholin. All of these substances are contained in both the wood and leaves of Pichi, so that both are valuable as drugs. Probably the soft resin breaks up into Fabinol and this by oxidation into Fabinaresene and Fabianaglycotannoid and this into chrysatropic acid and sugar.

Tschirch has also examined shellac as a plant exudation. This gum resin is the combined product of an insect coccus lacca and the trees it settles upon and wounds with its proboscis to get food. By the combined action of both, shellac is exuded. It consists of wax, coloring matter and resin, and has the following composition: Wax 6%, consisting of melissates, cerotates, oleates and palmitates of myricyl and ceryl alcohols. Coloring matter 6.5%, identical with Laccainic acid.

Resin 74.5%, ether insoluble 65%—resinotannol ester of aleuritic acid $C_{12} H_{25} O_2 CooH$.

ether soluble 35%—free fatty acids, volatile wax—giving the shellac its odor.

a resene erythrolaccin, oxy-methylanthraquinone.

Linde has extended the work of Dohme and Engelhardt on *Hydrastis Canadensis* and found that the relative amounts of hydrastine in it, that are combined and uncombined with acids vary; thus one sample contained 54.7% free and 45.3% combined, while another contained 35.8% free and 64.2% combined.

Beckurt and Ewers have examined pomegranate bark of tree and root of European origin. Tauret has shown that its anthelmintic property is due to four alkaloids: pelletierine, isopelletierine, methyl-pelletierine and pseudo-pelletierine, but principally of two of them, viz: pelletierine and isopelletierine. Both of these are volatile and can hence only be determined gravimetrically as salts or volumetrically. It is known that Java pomegranate bark is richer in these alkaloids than the European as Stoeder has obtained over 3% total alkaloids from the former and only 0.5% from the latter. Aweng has determined that the bark of root contained 0.23% alkaloids, old bark of tree 0.12% and new bark of tree 0.18%. Gehe & Co. have found 0.3% as an average content of fresh bark of root. Authors have found that fresh southern French bark of root contains 0.7% alkaloids, but that the same bark that was a year old or even less old, contained only 0.4% alkaloids. Also that of the total alkaloids 50% consist of pelletierine and isopelletierine the more active alkaloids, and is a nearly constant proportion. Hence a total alkaloid determination is a fair criterion of the value of the bark. They have also found that if fresh bark is used in both cases the bark of the tree contains as much alkaloid as the bark of the root. The conclusion to be drawn is that Java pomegranate should be used rather than the European, and that it should not in either case, be older than three months.

Gadamer has compared the Caffeine assay methods of Keller and Hilger-Juckenack for tea, coffee and kola, and finds that Keller's is in every way superior, i. e., shorter, simpler and yields much more caffeine and fully as pure. The assays may be of interest: Tea (mean of 50 samples) 3.01% caffeine. Coffee (mean of 6 samples) 1.45% caffeine. Kola Nut (mean of 25 samples) 1.68% caffeine.

Oesterle has further examined aloin and found that hydrochloric acid splits it up into an emodin which he terms aloe-emodin and which is identical with Rochleider's Rottlerin. As a product of oxidation of aloin, he has not obtained Tilden's aloxanthin (m. p. 260 degrees C.) but a beautifully crystalline substance (m. p. 223 degrees C.) crystallizing in orange-yellow needles, formula $C_{15} H_8 O_5$ and which he has named alochrysin. It is soluble in alkalies with deep red color and in hot water, but not in alcohol, ether or chloroform.

Alpers has recommended a new method of determining the presence of albumen in urine and it is claimed to be so delicate that 1 part

of albumen in 150000 parts of urine can thereby be detected. The substance used is mercury succinimide. Mix equal parts of urine acidified with hydrochloric acid and of a 1% mercury succinimide solution and shake. If any albumen is present, white floccules will appear.

Two new morphine derivatives have appeared during the past year and both are not new bodies chemically having been made previous to their introduction into medicine. They are Heroin, which is simply diacetyl-morphine and Dionine, which is ethyl-morphine. Dionine differs from codeine only in the latter being a methyl ester of morphine while Dionine is an ethyl ester. It is said to possess more narcotic properties than codeine, yet not be as powerful as morphine. It is given in the same doses as codeine.

Keppler has shown that borax or boric acid do not by their presence interfere with the activity of peptic or pancreatic digestion and can hence be used in food preservation without interfering with its digestibility. He tested them both in pepsin and pan-creatin solutions.

Vanino has found that a 1% solution of phloroglucin is a delicate test for the presence of even the minutest quantities of formaldehyde which is now being used largely as a preservative. It produces with the formaldehyde even in dilution of 1 to 10000, a raspberry red color.

Walter has found that the red coloring of carbolic acid is due to hydrogen dioxide, which is formed by the action of metals and light on the water present.

Frey and Vanino find that benzoyl peroxide is a powerful germicide and withal harmless. It is known that benzoic acid is a greater preservative and germicide than carbolic or salicylic acids. Now benzoyl peroxide is a much more powerful germicide than benzoic acid or hydrogen dioxide. It is a white powder (m. p. 103.5 degrees C) and is soluble in alcohol, glycerin or fatty oils but difficultly so in water. In glycerin solution it effectually killed diphtheria bacilli, bacilli pyocyaneus in 15 minutes and streptococci in 1½ hours.

Kassmer has made some interesting experiments upon artificially purifying the vitiated air in confined spaces such as sick rooms, mines, etc. He has found that life cannot exist when the percentage of oxygen in the air falls below 10%, and further that Sodium peroxide if mixed with fine sand and precipitated ferri hydroxide and continually kept moist will supply oxygen and absorb carbonic acid sufficiently to keep up a normal oxygen percentage in a confined space air.

Before concluding this report mention should be made of the advances made in unravelling the constitution of the alkaloids, and we

can now say that we know the constitution of quinine, cinchonine, morphine, thebaine, codeine, cocaine, caffeine, hydrastine, berberine, papanerine, pilocarpine and several other less important ones.

This year has developed for us the constitution of the two most important quinine and morphine, while Tafel's work on Strychnine will by next year undoubtedly make plain its constitution. The only practical value the prodigious amount of work necessary to do this possesses is not that we know the constitution, for this only interests scientists, but once known, atomically speaking, it is only another step to produce them synthetically.

The practical value of this step is that instead of paying \$2.00 an ounce for morphine we shall probably be paying 50 cent an ounce, or perhaps less. Synthesis may also cheapen strychnine, although this has fallen enormously in price during the last two years, about one-half, but it can hardly do so for quinine. What it will do for quinine is that instead of being an article that fluctuates with the nature of cinchona bark auctions at Amsterdam or the whims of manufacturers and London speculators due to its practically limited supply, it will be after the patent has expired, if it should be unfortunate enough to be burdened with one, independent of all these speculative features, and become a standard chemical, such as are bismuth, iron and potash salts, or acetanilid.

Respectfully submitted,

ALFRED R. L. DOHME, *Chairman.*

D. M. R. CULBRETH, M. D.

ABRAHAM H. HUBER,

CHAS. SCHMIDT,

W. R. RUDY,

The following Queries have been submitted by the Pharmacy Committee to be answered at the next annual meeting :

QUERIES.

1. Free Dispensaries: Do they afford the best and most economical means of dispensing free medical aid to the sick poor? Can you suggest a better and more economical plan of accomplishing the same end? Outline a law that would prevent the abuse of the public dispensaries by individuals who are able to pay for the services rendered them.

2. What has been the main causes which thus far have prevented the enactment of a pharmacy law for the State of Maryland, and how can these causes best be counteracted?

3. Is the sale of patent or proprietary medicines increasing or decreasing? Statistics from as many pharmacies as possible in this State are desired, embracing as many as possible of the more prominent proprietaries.

4. Is the selling of patent or proprietary medicines an advantage or a disadvantage to the retail pharmacist?

5. Are headache remedies containing Acetanilid dangerous and should they be offered for sale promiscuously to the general public? Give facts to substantiate the view taken.

6. To what extent do the various makes of Hydrogen Peroxide of commerce meet the U. S. P. requirements?

7. A report upon the quality of Bismuth Subnitrate and Subcarbonate of the market would be of value.

8. Tinctures made directly from crude drugs are claimed by some to be more reliable, and by others not more reliable than tinctures made from fluid extracts of the same drugs. Starting with an ample supply of one lot of a drug and making both fluid extract and tincture and then tincture from the fluid extract, this question is to be tested in the cases of Digitalis, Belladonna, Aconite Hyoscyamus and Cinchona.

9. Glucose and glycerin have both been recommended as preservatives for Syrup of Ferrous Iodide. Does the presence of either or of both these substances really improve the keeping quality of this syrup beyond that of the U. S. P. article? If so, suggest a formula.

10. How does the strength of the various so-called "Household Ammonias" of the market compare with the Ammonia Water, U. S. P.?

11. Is the solubility, of Potassium Chlorate in water as stated by the U. S. P. 1890 correct?

12. What is the best preservative for fruit juices and one that is not deleterious in any way to health? Experiments are asked for Formaldehyde, hydrogen dioxide, boric acid, salicylic acid, etc.

13. As salicylic acid is a common medicament, why should it be so much decried by the public? Are the amounts that are necessary to preserve any preparation in any way deleterious to health except by prejudice?

14. Do the Calomels of the market meet all U. S. P. requirements? Is corrosive sublimate present in any of them and to what extent?

15. Colchicum Root and Seed, both contain as their principle Colchicine, an alkaloid; why should both be official and which is preferable and for what reasons?

16. Comparative tests and samples are asked for, of the relative value of Yerba Santa, Licorice, Saccharin and other drugs in disguising the bitter taste of Quinine Sulphate and other substances.

17. Can you suggest an improvement on the U. S. P. process for making Syrup of Hydriodic Acid, with a view of increasing the permanency of this preparation?

18. If the pharmacist includes in his stock a general line of sundries, such as cameras, bicycles and accessories, toys, etc., has he a just grievance against the department stores for selling patent medicines?

19. With the local physicians supplying their patients directly with medicines, bought chiefly from some manufacturer, should the pharmacist be expected to refer his customers to the doctor, when asked to furnish a remedy for some simple ailment?

20. Does the distribution by the pharmacist of almanacs, circulars and other advertising devices with the pharmacists business card printed thereon, carry with it a personal endorsement of the advertised nostrum about which he knows nothing? If so, does not the pharmacist place himself in a questionable position with his patrons by this endorsement.

PROF. CASPARI: I move that Dr. Dohme's paper be accepted and published in the Proceedings and that a vote of thanks be tendered him, in fact, that more than the usual vote of thanks should be given him, as it will prove a valuable contribution to Pharmacy.

MR. HYNSON: I second the motion and must say that I enjoyed it very much indeed. (Accepted with applause.)

DR. DOHME: I thank you all very much indeed, and I appreciate the kind remarks of Mess. Caspari and Hynson. It was a great pleasure for me to work this report up. I agree with the gentlemen and think it will be of value to the Association. In working the paper up, I was convinced more and more, as I went along, how badly this State is in need of a Pharmacy Law, and I hope as with the other papers read and to be read, it will be of some value to the Proceedings.

PRESIDENT: It will give us great pleasure to listen to his Excellency Governor Lowndes.

GOVERNOR LOWNDES: I can talk to Lawyers, and I can talk to Teachers, but I cannot talk to Doctors and Druggists. I came up this morning to pay my respects to this Association and to meet your President and the members. I take a great deal of interest in all the institutions of the State and especially the Druggists. I addressed the teachers, who are holding their convention here, last night, and was glad to do so, as they are trying to better their interests in this State. I am sure the sole object of your Association is to better the interests of the Druggists in the State of Maryland, and I hope you will succeed. I will surely do all I can to aid you. I do not want to take up too much of your time, and as you are to have a swimming match at noon, and as I wish to witness it, I will not disturb your proceedings any further.

MR. DE REEVES: I want to thank the Governor for his kindly aid in the past in our efforts to secure a Pharmacy Law, and hope he will help us as nobly this fall.

MR. HYNSON: If I am not mistaken, your Excellency has been told that this State is the only one that has no Pharmacy Law. In view of the fact that so many adulterated drugs are put on the market, this matter seems to be a vital question, concerning all the people of the State, and I think a law cannot be passed too quickly. Such a law will be of more benefit to the people than to the conscientious Pharmacist. I make a personal appeal to the Governor and ask him to use every effort to help us enact a law.

GOVERNOR LOWNDES: I certainly approve of it.

MR. FOSTER: I move we adjourn until 3 o'clock.

Passed.

THIRD BUSINESS SESSION.

The Third Business Session of the Association was called to order, Wednesday afternoon, at 4 o'clock. The minutes of the last session were read and accepted.

PRESIDENT MCKINNEY: The first thing on the program is the Report of Committee on Trade Interests. I have received a letter from Chairman, Mr. John C. Muth, that he was unable to attend. I also regret to state that the Chairman on Business is also absent. Mr. John A. Davis, Chairman of Committee on Laws, is absent also; so that there will be no report from these Committees.

MR. CORNING: I offer the following resolutions:

RESOLUTIONS.

Resolved, That this Association in annual session heartily endorses the action of its members at the last semi-annual meeting when they agreed to affiliate with the National Association of Retail Druggists. It also wishes to express its belief that such an organization is necessary for the welfare of retail Pharmacists and views with a feeling of satisfaction the progress this association has made.

Resolved, That the incoming President be instructed to appoint a delegate to represent this association at the first annual meeting of the N. A. R. D., at Cincinnati, October 3-6, next.

Resolved, That the Treasurer be instructed to send at once to the Treasurer of the N. A. R. D. a sum equal to 25 cents for each member who has not joined a local organization paying a per capita assessment to the National Association.

PRESIDENT: Are you ready to adopt these resolutions?

MR. HYNSON: I suppose you all know that the N. A. R. D. must have money. When Mr. Schulze and myself went out to the

last meeting, we were not credited as representing the Maryland State Pharmaceutical Association. The delegates recognized were Mr. Corning and Dr. Dohme. We pledged the Association to pay \$25.00. The question then came up as to assessments in the future, and it was finally decided that each member was to be assessed 25 cents, but we were not to pay on members who paid their assessments in other affiliated associations. I have taken an active part in the N. A. R. D., which is a representative body, and I hope our Association will pay this money before some other claims.

PRESIDENT: Then according to your statement, we owe them \$35.00.

MR. BECK: This is not clear to my mind, and I would like to have it explained.

MR. HYNSON: I made the statement that the amount subscribed is not to be paid as an assessment, but as a beginning. The question is, will we or will we not affiliate. When we agree to do this, we pledge ourselves to pay 25 cents on each of our members who is not a member of any other association.

DR. DOHME: I understand that Mr. Corning and Mr. Hynson pledged us to pay \$25.00, and I think we had better look into it; and I move that we reconsider the motion on affiliation.

MR. HYNSON: I move that the motion made at the semi-annual meeting be considered null and void.

PRESIDENT: We must now reconsider that motion first.

DR. DOHME: I would like to know what affiliation means.

MR. C. E. DOHME As I understand it, we are to pay 25 cents on each member who is not a member of some other association. This, as I look at it, is very bad, as a good many of our members are not eligible to membership, being wholesale druggists.

MR. CORNING: As far as I understand it, it only refers to this one year.

DR. DOHME: Of course the association has at all times our sympathy and our help whenever we can give it. I suggest that a clause be inserted into the resolution as to how much we are to pay and when we are to pay it, and whether the word "affiliation" pledges us to pay a certain sum of money each year.

MR. HYNSON: It is rather surprising to me that an association gotten up for the benefit of a retail association should be antagonized by any. We should all be interested in the retail association and especially the wholesaler, as he is dependant upon the retailer.

MR. CORNING: The word affiliation is a very broad word, and I would like to know whether it means any pecuniary obligation, and how far it goes and what it binds us to, and whether it binds us to any pecuniary help at all.

DR. DOHME: Well, as I understand, it means moral and pecuniary support. Now as Mr. Hynson has asked for an assessment, I would like to know whether this assessment is to be annual or only this year?

MR. CORNING: You are treating Mr. Hynson as a delegate from the N. A. R. D., asking for a contribution. But Mr. Hynson is a member of this Association and as such he asked for this assessment of 25 cents.

PROF. CASPARI: Mr. Corning made the motion.

MR. CORNING: As I understood Mr. Hynson's resolution, it was whether we would affiliate with the N. A. R. D. Now it is, whether we will contribute. The association will be a separate thing from us; and as to contributing, it is a matter as to whether we have confidence enough in the association.

MR. HYNSON: If this Association decides to pay this assessment of 25 cents they will be allowed to send delegates. This is about what is meant by affiliation.

MR. BECK: Then as I understand it, if we send delegates, we will have to contribute.

MR. CORNING: I fathered the resolution and I am going to stick to it. I think a man should treat an adopted child just as he treats his own.

PRESIDENT: The motion is to adopt the resolution as offered by Mr. Corning.

Resolution Passed.

DR. DOHME: I think we should now consider how this 25 cents on each member is to be paid.

Mr. DOHME: I think that we should pay 25 cents on each member who is not a member of any other association.

DR. CULBRETH: I regret to say that only about half of our members pay their dues, and I think you had better word that resolution, that we are to pay 25 cents only on members in good standing. Not more than 100 members pay their dues.

MR. CORNING: I make an amendment to that resolution that no member can come under this rule who has not paid his last year's dues.

Passed.

PRESIDENT: The Treasurer is instructed to pay 25 cents on all members in good standing who are not members of any other association.

MR. HYNSON: How I want to put myself right. I have less interest than any other member. I was sent as a delegate and I am going to do the best I can. But if I ever get out of it, I will never get myself into such a scrape again. (Applause).

MR. DOHME: When they picked out Mr. Hynson to represent them, they picked out the right man. He always does his best. I remember when he was the local secretary of the A. Ph. A. he was the best man we ever had.

MR. HYNSON: Now as to the expenses of the delegates. Who pays the expenses? The Association or the delegates?

MR. DOHME: If we affiliate we should send a delegate. The delegates of the A. Ph. A. always pay their expenses except the tickets, and I think this would be a good way to settle this question. Let the delegates pay all their expenses except the tickets.

DR. CULBRETH: Is it in Mr. Hynson's power to go as a delegate.

MR. CORNING: I move that the President appoint one delegate to represent this Association at the next meeting of the N. A. R. D.

Passed.

MR. HYNSON: As President of the N. A. R. D. I extend you all an invitation to be present at our next meeting, and I hope you all will be able to be there.

PRESIDENT: I thank you very kindly for the invitation. It will not be convenient for me to go, but I hope some of our members will be able to attend.

PRESIDENT: We will now hear the report of Committee on Adulterations, by Prof. Base:

REPORT OF COMMITTEE ON ADULTERATIONS,

To the Maryland State Pharmaceutical Association,

MR. PRESIDENT AND GENTLEMEN:

The Committee on Adulterations, appointed in accordance with Article XVI., of the By-Laws, having accepted Query 10, page 56, of the Sixteenth Annual Proceedings, viz: "The powdered drugs offered the drug trade are a fertile field for adulteration; an examination of some of them would no doubt develop interesting results," reports as follows:

Powdered Opium and Jamaica Ginger were assayed for morphine and oleoresin respectively, according to the methods laid down in the U. S. P. Jamaica ginger, capsicum, gamboge, black pepper, rhubarb, castile soap, jalap and sototrine aloes were examined microscopically. The drugs were bought in open market at various pharmacies. Four samples of each drug were examined, being marked I., II., III. and IV.

POWDERED OPIUM.

SAMPLE.	I.	II.	III.	IV.
Per Cent. of Morphine Found	13.90 13.71	13.48 13.89	14.44 14.14	12.71 12.51
Average	13.805	13.68	14.29	12.61

Sample IV., it will be noticed, falls below the U. S. P. requirement, which states that Powdered Opium must contain not less than 13% nor more than 15% morphine.

JAMAICA GINGER. (ASSAY).

The drug was percolated in 10 Gm. quantities with ether until quite exhausted. The percolate was evaporated on the water-bath at a temperature not much above the boiling point of ether, and when the latter had disappeared, a stream of air was blown through the flask several times to remove traces of ether and moisture. The method of drying the oleoresin on the water bath at the temperature of boiling water to constant weight was not adopted, because there seemed to be no doubt that a portion of the volatile part of the extract would be driven away. By that process an oily-looking liquid collected in the neck of the flask which was not readily volatile and which had, when removed on a glass rod or strip of paper, the odor of ginger.

The proportion of oleoresin in Jamaica ginger varies considerably, but as the Pharmacopœia has fixed no limit to the percentage of oleoresin that must be present, we cannot say whether a specimen is adulterated or not from the result of a chemical assay. All that can be concluded is, that one sample of ginger is better or worse than another, according to the per cent. of oleoresin found. The following percentages found by various workers, will show the variation in amount of oleoresin in Jamaica ginger: 4.8, 4.62, 4.30, 4.84, 5, 3.2, 5. Some writers state that the average quantity of oleoresin in Jamaica ginger is about 5%.

Results of assays :

SAMPLE.	I.	II.	III.	IV.
Per Cent. of Oleoresin Found	4.7	5.59	3.95 3.94	4.53

Sample III. is inferior to all the others. It was very coarsely ground and of a dark-yellow color. The color, however, was due to

the coarseness of the powder, as upon grinding it finer, the color became light-yellow. Two assays were made, one on the coarse powder, the other after grinding the powder finer. The results are the same.

MICROSCOPIC EXAMINATIONS.

Ginger.—The four specimens assayed were examined microscopically. Nos. I., II. and III. found to be pure. No. IV. was moderately adulterated with corn-starch, gathered in lumps and easily recognized by the polygonal shape and distinct star-like cleft nucleus of the grains.

Capsicum.—Samples I. and II. were pure. Sample III. was adulterated with wheat flour, agglomerated in flakes, which could be seen even with the eye, on close inspection. Sample IV. was adulterated heavily with corn-starch and another kind of starch consisting of compound granules, which were made up of small angular grains, perhaps oat starch. Judging roughly, the adulteration seemed to be 40-50%. In spite of this fact, the color of the powder was darker than that of I., II. and III. Pure Capsicum contains no starch.

Gamboge.—Samples I., II., III. and IV. were adulterated, apparently with dextrine made from corn-starch. Many of the starch grains were still well defined and assumed a blue color on adding iodine solution. The dextrine particles were somewhat star-shaped and were colored purple by iodine. On adding dilute caustic soda, the gamboge particles were quickly dissolved leaving the starch and dextrine standing out prominently, which, however, were soon decolorized, swollen and finally dissolved. Sample III. was heavily adulterated with wheat-flour which showed the characteristic rounded and oval starch grains of various sizes, together with cell-wall fragments.

Black-pepper, Rhubarb, Socotrine aloes were all apparently pure.

Castile Soap.—Samples I. and II. contained a small quantity of corn-starch and some small rounded granules, which stained yellow with iodine, thus seeming to be proteid in nature, and no doubt, aleurone grains. A few cell-wall fragments were also found. Very likely the adulterant was corn-meal. Sample III. was pure. Sample IV. contained a small quantity of corn-starch and some cell fragments.

Jalap.—Samples I., II. and IV. were pure. Sample III. contained corn-starch.

It thus appears that adulterated drugs are found in the market and that the pharmacist might profitably bring to bear on this subject the use of a microscope. It is also clear, from an investigation of this kind, that it is important in these days of powdered drugs to teach the

use of the microscope to the students of the Colleges of Pharmacy. Unfortunately so many pharmacists, newly graduated, as well as older ones, are indifferent to the matter of adulterations, and rely too much on the wholesaler to furnish pure articles. While most wholesalers, can be relied upon, some evidently cannot and the pharmacist ought to consider it his duty to try to discover who the unreliable ones are, not only in his own interest, but also in the interest of the people who patronize him. If he buys adulterated drugs, he is a victim of a fraud, and if he sells the same drugs, he is guilty of the same fraud, although it may be unconsciously perpetrated.

DANIEL BASE,
HENRY P. HYNSON,
JOHN G. BECK,
Committee.

MR. HYNSON: I think a rising vote of thanks should be tendered Prof. Base, for his valuable paper.

PRESIDENT: I hesitated sometime before appointing a chairman of Committee on Adulterations, but I certainly selected the right man. The result of his researches has given us a very valuable paper, and the vote of thanks should be unanimous.

Passed by a rising vote.

DR. CULBRETH: I cannot help recalling the reply of one of my students, to the question: "Give a good test for distinguishing Rochelle Salt from Magnesia." His answer was: "Spread it out on a piece of paper and if it blows off, it is Magnesia." (Laughter.)

PRESIDENT: We will now take up the 1st Query.

1. Report upon the quality and strength of the Quinine Pills of the market.

MR. HYNSON: This Query was assigned to me and I found I was tackling a hard problem, but I hope at some future time to present a paper on the subject that will be conclusive.

PRESIDENT: In answer to Query No. 2, Dr. Culbreth has kindly consented to read Mr. John F. Hancock's paper on the subject.

YELLOW AND GREEN IODIDES OF MERCURY.

REPLY BY J. F. HANCOCK.

2. "Yellow and green Iodides of Mercury are both prescribed and dispensed as Proto-iodides of Mercury; has either any advantage over the other? If so what are they and which is preferable? Just what the difference between them is, demonstrated by chemical evidence, would be of value."

Iodide Mercury.—U. S. P., 1890. Gives it: Hydrargyri Iodidum Flavum, $Hg_2 I_2 = 652.66$.

The U. S. P., 1880, gives the name Hydrargyri Iodidum Viride.

In the various Pharmacopœias it has been known as Yellow and Green Iodide of Mercury and Proto-iodide of Mercury. It has been sold by the one name with different physical characters—which being noticed by observing men, has caused more or less dissatisfaction and to manufacturers it must have been a source of much annoyance. Not only this, but other preparations of Iodine have been equally unsatisfactory, because of instability as suggested to the eye. The present U. S. P. formula is a modification of former methods. It is as follows:

Mercury 50 Gm.
Nitric Acid.
Potassium Iodide.
Distilled Water.
Alcohol, aa q. s.

Manipulation.—Mix 20 cc. each of Nitric Acid and distilled water, and, when the liquid is cold, pour it upon the Mercury, contained in a small glass flask. Set the mixture aside in a cool, dark place, and agitate it occasionally, until the reaction ceases, and a little Mercury still remains undissolved. Separate the crystals of Mercurous Nitrate, which will have formed, from the mother-liquid; allow them to drain in a glass funnel, and dry them on bibulous paper, in a dark place. When the salt is dry, weigh off 40 gm. of it, and dissolve it in 1000 C. C. of distilled water, to which 10 C. C. of Nitric Acid had previously been added. Having prepared a solution of 24 gm. of Potassium Iodide in 1000 C. C. of distilled water, slowly pour the solution of Potassium Iodide into that of the Mercurous Nitrate, with constant stirring; allow the precipitate to subside, decant the supernatant liquid, and transfer the precipitate, together with the remainder of the liquid, to a filter. When the precipitate has drained, wash it with distilled water until the washings no longer have an acid reaction upon litruns paper, and afterwards wash it with alcohol, as long as the clear, colorless washings give any color with Hydrogen Sulphide test-

solution. Lastly, dry the product in a dark place, between sheets of bibulous paper, at a temperature not exceeding 104° F. Keep it in dark amber colored vials, with the least possible exposure to light.

Description.—A bright yellow, amorphous powder, odorless and tasteless. By exposure to light it becomes darker, in proportion as it undergoes decomposition into metallic Mercury and Mercuric Iodide.

Dr. J. Mitchell Bruce remarks that the Green Iodide of Mercury has no longer a place in the British Pharmacopœia, because of being so unstable and therefore dangerous, but still much used. Dr. Bruce claims that the dull green powder, becomes yellowish from conversion into the red Iodide by keeping.

We were informed by a pharmacist, that on one occasion he ordered the pills of Proto-iodide of Mercury for a prescription. They were the product of a reputable manufacturing firm and the pills had the characteristic-greenish yellow color, but when a renewal of the prescription was ordered and another hundred ordered of the wholesale house, specifying the same makers, he was surprised to notice a marked difference in the color of the pills, though labeled as before, the latter were distractively yellow. He called the attention of an employee of the manufacturing firm to the fact, and was informed that in ordering the pills of Proto-iodide of Mercury, he should have specified, Green or Yellow, as his house supplied both kinds. Such condition of things must be confusing to the average dispenser of prescriptions and calculated to produce an erroneous impression of the Pharmacist, in the mind of his customer.

The preparation as formulated in the U. S. P., 1890, is more distinctive, and less likely to change in color. Yet the salt seems disposed to change through the influence of both light and air.

The proceedings of the A. Phar. A., 1858, give the views of Dr. E. R. Squibb, on Iodide of Mercury, in some notes on the revision of the U. S. P. from which we glean in part: "In a chemical point of view, this preparation may be regarded as one of the most indefinite and uncertain of the *Materia Medica*: whilst therapeutically it is certainly very far from being what is desired."

"From being mild and manageable at times, it varies so that harsh and even violent effects are not unfrequently encountered from its use, as prepared in strict accordance with the U. S. P. it always contains the red Iodide, and this in various proportions, according to slight variations in the management. So that it must have been an oversight in those who constructed the present formula, that a careful washing with strong Alcohol was omitted—But even then, though free from red Iodide, it contains a large proportion of the yellow, or sub-

iodide, and of Metallic Mercury. And these proportions vary, probably, every time it is made, even though made by the same person from the same materials.—The preparation should never be dispensed without the most careful testing it and fortunate that this testing is very simple and easily performed. In concluding the unsatisfactory notice of this preparation, the writer submits the opinion that, unless some discriminating solvent can be found for the separation of these lower Iodides of Mercury, they are not adapted to medical use."

The following quotation is from the pen of our late friend and honorable member, William Silver Thompson: "The difficulty of obtaining this compound of sufficient degree of purity for medicinal use, has drawn the attention of numerous pharmacists, to the subject ; and lengthy and rather unsatisfactory discussions have resulted from it. After several experiments I succeeded in producing only one perfectly pure sample, which was prepared by the plan of Mr. John M. Maisch, of Philadelphia—see his paper in the American Journal of Pharmacy, Vol. 29, p. 11.—He first prepares the Iodide, according to the U. S. P. and then purifies it according to the following method, which is given in his language: "To get rid of Metallic Mercury, with which the preparation is contaminated, it must be treated with dilute Nitric Acid, and afterwards with hot Alcohol, to remove any biniodide present ; then only is it in the state of purity in which the physician expects to get it,"—see proceedings of Maryland College of Pharmacy.

We find that the first mention of Mercurous Iodide, was in the French Journal of Pharmacy, 1828, contributed by M. Henry, which was translated into English and published in the American Journal of Pharmacy, 1829, p. 204. The process for this formula was the double decomposition of Mercurous Nitrate and Potassium Iodide. The first formula was so objectionable that M. Berthemot, suggested a modification, which was adopted and has continued in use—viz: by direct combination of the elements through trituration with Alcohol.

The late W. S. Thompson, found that the U. S. P. direction (Edition 1850) directing Alcohol q. s. to form a paste was not entirely unobjectionable. He found that in triturating the Mercury and Iodine, made into a paste with Alcohol, that the combination did not take place with any degree of rapidity until the mixture was nearly dry. He further found that the evaporation of Iodine from the soft mass would sensibly effect the eyes, while in the act of triturating ; indicating an indefinite loss of Iodine—therefore he decided to use but very little Alcohol in the first stage of the operation, and found the combination to form rapidly, without so much loss of Iodine.

The London Pharmacopœia, 1836, gave the formula for Proto-iodide of Mercury, as published in the U. S. P., 1850, as follows :

Take of Mercury, . . .	1 oz.
Iodine.	3 drs.
Alcohol.	q. s.

Rub the Mercury and Iodine together, adding sufficient Alcohol, gradually, with trituration, until globules of Mercury are no longer visible. Dry the powder immediately with a gentle heat, without the access of light. When finished keep it in a well-stoppered vessel.

Description.—A greenish-yellow powder, insoluble in water, Alcohol, and solution of Chloride of Sodium, but soluble in Ether. Heated quickly it sublimes in red crystals, which afterwards become yellow.

The materials and their proportions are the same as the foregoing, in the U. S. P., 1880, but in our last edition the formula has been materially changed and the product has been said to be more stable, yet prone to change. If exposed to direct or refracted rays of light that portion of the powder most exposed will blacken.

But perhaps the latest contribution to the literature of Mercurous Iodide, of importance here, is that of Maurice Francois, who has been reviewing the experiments of Boullay. He concludes that the proper color for the pure Amorphous Mercurous Iodide is that of a bright yellow, resembling the tint of Lead Chromate, and that the Yellowish Green Iodide of Commerce, owes its color to varying proportion of free Mercury. He suggests that the preparation made by precipitation and washing in the dark is the true salt and should be of a bright yellow color. Our conclusion, therefore is, that the U. S. P. Formula, 1890, is an improvement on the past and furnishes a more stable preparation.

In examining specimens in various Pharmacies we have noticed many shades in the same size vials and from the same manufacturing chemists. Most of the specimens examined do not answer to the description of our latest Pharmacopœia and the inference is natural that much of the Iodide of Mercury in the Pharmacies, has been made according to the formula of former Pharmacopœias and very ununiform in character. Our opinion is that the uncertainty of quality and the possible contamination of red Iodide should engage the thoughtful attention of all dispensers, particularly as the risk is great and the test simple and convenient. As for the pills referred to in this paper, it would seem from what has been said, that those of the Green Color were from the product of the older formula and those of the bright yellow, the product of the U. S. P., 1890.

Baltimore, July 10, 1899.

PROF. CASPARI: Green and Yellow Iodides of Mercury have received a good deal of attention. Twenty-five years ago it was supposed that the true color of Mercurous Iodide is green and such a view was quite natural since the methods then in vogue for the preparation of the salt invariably produced a green compound; all red Iodide having been removed by washing with Alcohol, it was but reasonable to infer that the remaining compound was of exact chemical composition, and therefore the color produced must be correct. Manufacturers in those days aimed to produce a perfectly green preparation, avoiding as far as possible all yellowish tints. The plan of triturating red Iodide of Mercury with an equivalent quantity of Metallic Mercury appeared to insure a uniformly green product more readily than the former official process. After careful study of the Mercurous Iodide had developed the fact that the true color of the salt is yellow, investigation of the green compound revealed the fact that the green color was due entirely to the presence of Metallic Mercury in very fine state of division, which being of blue color, naturally produced green by admixture with the yellow iodide, as the blending of blue and yellow always produces green. This fact has been well known for 15 years and to-day no doubt any longer exists as to the proper color of true Mercurous Iodide. The present official directions aim to insure a pure yellow product, which of course is very sensitive to light and easily becomes streaked with green; due to partial decomposition. If official directions for mixing the solution of Potassium Iodide and Mercurous Nitrate be reversed, or the acidulation with the Nitric Acid be omitted, a basic product is apt to result and the color will be found greenish-yellow, more or less dark, depending on the degree of decomposition. While the yellow Iodide requires careful exclusion of light and air, it nevertheless must be recognized as the true chemical compound, whereas the green commercial iodide is simply a mixture of Mercurous Iodide with varying proportions of Metallic Mercury.

In this connection it may not be out of place to call attention to the ready decomposition of Mercurous Iodide by alkali iodides in solution and even Ferrous Iodide in the form of the official syrup. Physicians sometimes prescribe Mercurous iodide in connection with Syrup of Ferrous Iodide—red Mercuric Iodide will be formed

and remain in solution in the excess of Ferrous Iodide, while Metallic Mercury will be deposited as a bluish-gray powder. Poisonous effects may result from such combinations.

PRESIDENT: Prof. Charles Schmidt is not present to answer Query No. 4, but he has written a paper on the subject which will be read by Prof. Caspari:

TABLET TRITURATES.

BY CHAS. SCHMIDT.

Query No. 4.—“A report upon the keeping qualities of Tablet Triturates would prove of great value to the medical and pharmaceutical professions. Several of the most popular formulas should be tested when fresh and after the lapse of six months, including both those containing volatile and non-volatile ingredients.”

The query assigned me and indicated by the above, is doubtless one of considerable importance in view of the extent of the use of this class of preparations by the medical profession. It must be conceded that, if tablet triturates are reliable and free from undue danger of deterioration, they form a most convenient method of administering medicaments in concentrated form. Their ready portability and comparatively quick disintegration or solution and their convenient dosage are factors which have gained for them their present popularity. However, as no single class of pharmaceutical preparations is suited for the exhibition of each and every medicament, so tablet triturates have, or should have, their limitations. As a general rule the more readily decomposable or volatile a substance, the less likely it is to be suitable for preparation into tablet triturates. Yet it must be admitted that even with such substances it is possible in some cases to overcome at least in some measure the objection raised.

In the work of which this paper is the summary, I have confined myself within the scope of the query. It thus remains for me simply to name the tablet triturates selected for observation and to state the comparative results and the conclusions deducted therefrom.

Calomel.—Tablets containing $\frac{1}{4}$ gr. and $\frac{1}{2}$ gr. of this medicament were found after eighteen months to be perfectly white and free from any evidence of deterioration. Therapeutically they were quite as active as freshly made tablets.

Calomel $\frac{1}{2}$ gr. and Sodium Bicarbonate $\frac{1}{4}$ gr.—Tablets of this combination were carefully kept during a period of ten months, all

light being excluded from them. At the end of this time they were found perfectly white in color and prove themselves therapeutically quite as active as fresh tablets. External evidences of deterioration were entirely absent. In an experiment with similar tablets a few years ago, two samples were taken from the same lot, immediately after their preparation. One sample was placed in an amber glass vial and well corked. The second sample was placed in a blue glass vial and also well corked. The two vials were then placed side by side on a shelf immediately adjoining a window and examined every two or three months. The sample in the blue vial showed a gradual, and finally quite marked change in color to a dull gray at the end of eighteen months, whilst the sample in the amber vial was almost as white as when first made, only a very slight yellowish coloring being apparent. Similar experiments with flint glass vials resulted in the complete discoloring of the tablets in less than five weeks. These and many subsequent observations prove that light is a most important agent, tending to the deterioration of these and many other tablet triturates. It was further observed that the change in tablets of Calomel and Sodium Bicarbonate is more rapid the larger the proportion of the Bicarbonate to the Calomel. In making these tablets care should be taken to select a Sodium Bicarbonate as free from carbonate as possible. The foregoing remarks apply also to all combinations containing Calomel and Sodium Bicarbonate. Ipecac and podophyllin are quite favorite additions to these two substances in tablet form and are very extensively used. Such combinations, however, are more prone to decomposition than calomel and soda alone, and the tablets require greater care in making and in storing.

Red Mercuric Iodide, Yellow Mercurous Iodide, "Green Mercurous Iodide."—These tablets were found to require the greatest care in preparation and in storing. Like the chemicals they contain, all are prone to decomposition. The red mercuric iodide tablets, however, have proved themselves more stable than the "green" mercurous iodide tablets, and the latter were more stable than those containing the official yellow mercurous iodide. I have known the latter tablets to decompose during the process of preparation. This is especially likely to occur on a bright sunny day when the light is strongest. My observations do not prove that the tablets of the various mercury iodides decompose any more readily than do the chemicals themselves. The United States Pharmacopœia requires the official mercury iodide to be rigorously protected from the influence of light and the same precaution should naturally be observed in reference to tablet triturates containing them. Samples of triturates containing 1-16 gr. red mercuric iodide were carefully kept for one year and were then found only slightly paler than when freshly made; whilst triturates of "green"

mercurous iodide were more decomposed after the same period and tablets of the official yellow mercurous iodide were found partially decomposed after four months keeping in an amber vial.

Mercuric Corrosive Chloride.—Tablets containing this substance keep quite well for a year or longer. A slight discoloration, however, sometimes takes place in old tablets, the color changing to a dull yellowish tinge. This discoloration is more marked and more rapid in proportion to the increase of the chemical to the organic diluent, if such be used. The tablets should not be stored until perfectly dry and should be well protected against the action of light and air.

Arsenous Acid.—These tablets usually prepared in weak dosage, were found in perfect condition after thirteen months.

Calcium Sulphide.—As far as could be determined by observation tablets containing this sulphuret, keep about as well as the chemical itself. The latter is readily oxidized by continued contact with the air and the same result takes place when tablet triturates of calcium sulphide are unduly exposed to atmospheric action by careless storing. It is essential that the tablets be rapidly and thoroughly dried before placing into containers.

Arsenic Iodide.—This compound itself is rather unstable and the same is true of triturates containing it. The gradual loss of iodine is unavoidable and a deterioration must in time be the result. The tablets require careful storing in tightly closed vials.

Arsenic Disulphine, (red).—Tablets representing various strengths of this compound were found in quite perfect condition after fourteen to eighteen months. The stability of the sulphide precludes their ready decomposition. The same remarks apply also to the following :

Tartar Emetic and Copper Arsenite, both of which substances are used extensively in the form of triturates.

Aloin.—Tablets containing $\frac{1}{4}$ gr. of this substance were selected for observation. After eight months they showed little, if any, change in color. Therapeutic tests on strong healthy workmen showed them still quite as effective as fresh tablets.

Podophyllin.—Tablets of various strengths of this resin more than a year old were found perfect in their physical appearance. Tested by administration they proved to have lost none of their activity.

Opium.—Samples of tablets containing this drug and nearly two years old were found perfect in shape and color. Their therapeutic effect had apparently not been diminished in the least.

Aconite Tincture.—These tablets representing one minims of tincture of aconite root each, were after eight months found perfect in

appearance. Two tablets were chewed and swallowed producing promptly and in quite a marked degree the peculiar tingling and dryness of the tongue and fauces. This local effect was no less in degree than that produced by freshly made tablets and lasted between two and three hours.

Belladonna Tincture.—Tablets representing two minims of the tincture of belladonna leaves after one year showed no change whatever in physical appearance. Six tablets taken in doses of two each, produced about the same mydriatic effect as the same number of freshly made tablets.

Morphine Sulphate.—Tablets of this important alkaloidal salt were found to keep perfectly, showing no loss in therapeutic effect after nearly two years. The tablets, like the salt itself, become slightly yellow with age, but as far as I have been able to observe this discoloration does not decrease the potency of the drug.

Morphine Sulphate and Atropine Sulphate, in combination.—These tablets were found to keep well under favorable conditions, namely, thorough drying before storing and exclusion of moisture, light and air, as much as possible. They do, however, discolor more readily than do tablets containing either—morphine sulphate or atropine sulphate alone, and this discoloration is more marked, the larger the quantities of the two salts contained in the tablets. As far as could be observed this discoloration, which begins in from eight to twelve months, depending much on the conditions under which the tablets may have been kept, does not diminish materially the effect of these drugs. Quite good anodyne and soporific effects have been obtained from tablets having a decided yellow color.

Apomorphine Hydrochlorate.—This salt decomposes quite readily especially when exposed to light and air. This same comparatively rapid deterioration is transferred to tablet triturates and is evidenced by a dark dirty greenish color. If carefully made and stored the tablets will keep fairly well for six or eight months, but this time is much shortened if the tablets are unduly exposed to the air and to light.

Strychnine Alkaloid, Sulphate, Nitrate, Arsenite.—Tablet triturates made of the foregoing alkaloid and its salts have been found to remain quite permanent, showing not the slightest evidence of deterioration after eighteen months to two years.

Cocaine Hydrochlorate.—Tablets containing $\frac{1}{4}$ gr. of this important salt, when dissolved in water produced perfect local anaesthesia when applied to the eye. The tablets had been kept for fourteen months and showed no external changes.

Nitroglycerine, (Glonoin).—By observations extending over several years, tablets containing this important and potent remedy have been found to be thoroughly stable and effective after having been kept on hand for two years and longer.

Camphor, Benzoic Acid, Creosote, Guaiacol, Essential Oils in general and their constituents, such as Menthol, Eucalyptol, Thymol, Etc.—Tablets containing these substances are more or less liable to deterioration on account of the volatilization of these components. The loss of volatile ingredients will be in proportion to the degree of volatility of the substances, to the length of time and the temperature employed in drying the finished tablets, and to the lack of care in storing them. They should always be kept in a cool place. The drying of these tablets should always be conducted at the ordinary temperature. To illustrate the gradual loss of such volatile medicaments from finished tablets, I will state that I have repeatedly seen containers in which tablets with camphor as a constituent had been stored for two or three months, with the sides completely covered with a thin layer of sublimed camphor. I have also observed tablets containing benzoic acid to be completely covered on the outside with minute crystals of the acid and these crystals also appeared, in a less degree, however, on the sides of the container. Menthol behaves similarly, but crystallizes much more rapidly than either camphor or benzoic acid. These unprotected tablets should obviously always be dispensed in well corked glass vials; which especially if of amber glass, are undoubtedly best suited for all tablet triturates. The ordinary paper pill boxes offer little protection against volatilization, besides being more or less an absorbent of some of these substances.

When tablets containing such volatile substances are made in the lenticular compressed shape and coated with sugar or chocolate they are far more permanent. The same holds good in the case of tablets containing substances readily liable to chemical deterioration through exposure to light and air.

From the foregoing special, and from many similar observations made during the past six or seven years, I arrived at the following conclusions: First—Tablet triturates will not likely keep better, nor should they be expected to keep better than the medicaments which they contain; nor will they, nor can they be expected to keep as well when stored under less favorable conditions. The disadvantage, if any therebe, is likely to lie with the tablet triturate. Second—Tablet triturates form a class of stable pharmaceutical preparations, keeping well a reasonable length of time and comparing in their keeping qualities quite favorably with most other forms of pharmaceutical prepara-

tions, provided the following conditions are complied with in their making and storing:

First—The medicaments must be reasonably suitable in physical and chemical qualities for dispensing in this form of preparation.

Second—The best quality of medicament must be used in their preparation.

Third—The greatest care must be taken to select a good quality of the diluent and excipient best suited for each kind of tablet. And upon this depends often in the largest measure the keeping qualities of the tablets; for no one excipient or diluent will answer equally well for all kinds of tablets.

Fourth—Due care and proper pharmaceutical knowledge and skill must be employed in the process of making these tablets. This includes proper trituration, correct succession in adding the various components, care in the degree of moistening the mixture, proper and perfect filling of the molds, and last, but quite as important, indeed, careful and thorough drying of the finished tablets.

Fifth—The tablets should be carefully stored in a perfectly dry and cool place in perfectly clean and dry containers, preferably of glass. They should be carefully protected against the action of light and air. Except when tablets are removed therefrom the containers should be kept tightly closed. As has already been stated amber glass vials are best suited for storing and dispensing tablet triturates, the small amber homœopathic vials making quite a neat package.

In conclusion, I will state that the observations herein recorded were made with tablets in which the precautions here enumerated had been carefully observed. Any variations from these conditions may naturally be expected to lead to variable results in the keeping of tablet triturates.

Baltimore, July 8th, 1899.

PROF. CASPARI: In regard to this paper by Mr. Schmidt, allow me to say that you can rely upon every statement he has made. Mr. Schmidt has had a long experience in the manufacturing of tablet triturates, and he probably knows more about them than any one in the business.

PRESIDENT: I have received three letters from Washington in regard to our Association sending delegates to the next meeting of the Pure Food and Drug Congress.

DR. DOHME: Mr. President. I move that this matter be taken up after we hear the Report from the Committee on the Pure Food and Drug Law.

Passed.

On motion the meeting then adjourned.

FOURTH BUSINESS SESSION.

The Fourth Business Session of the Association was called to order, Thursday morning, at 10 o'clock, by President McKinney. The minutes of the previous session were read and approved.

PRESIDENT: We will now listen to Report of Committee to Confer with Medical Societies. Mr. Corning is Chairman.

MR. CORNING: I have not written a report, but there are several important matters, I would like to have discussed. I have been approached by several doctors about putting poison labels on bottles when not directed by the physician. While I have no settled views on the question; yet, such labels should not be put on unless it is plainly written on the prescription. Another important matter is that of giving copies, which brings up the question of ownership. Renewing prescriptions when the physician writes or has printed on the prescription "not to be repeated" is another serious question, which some druggists do not always observe. There is also some complaint about copying the prescription on the label.

MR. HYNSON: This matter I must say has been sadly neglected, so much so that the doctors have been compelled to call our attention to it. I think the doctor should write on his prescription what he wants put on the bottle. I have never had the nerve to go any further than to put on the bottle "Caution: Not to be Taken." Poison labels on bottles sometimes deters people from taking medicine, and this is often a drawback to the sale of profitable drugs, and I move that this Association suggest that putting a poison label on a bottle when not ordered by a doctor, is not consistent with good practice.

PRESIDENT: You have heard the motion. Are there any remarks?

MR. CORNING: I would like to make this motion stronger; that it is not consistent with good practice to put any kind of a label on a bottle containing a prescription, unless it is so ordered by the doctor, and let this motion be submitted to the medical societies in this State, and whatever action they take, we will be perfectly willing to follow.

MR. HYNSON: Now this is a matter that should be well considered, because I have known of physicians who refused to send prescription to druggists who put poison labels on the bottles, and the druggist is not always to blame, because the patient often wants it and he cannot get out of doing it.

MR. POWELL: It was only recently that I saw a prescription blank from a Philadelphia physician, and he had printed on it: "If a cross mark is on this line, the druggist will please affix a copy," and he thus requested a formula to be written of what the bottle contained on the label. I think it would not be a bad idea to adopt such a blank.

MR. BECK: I do not think that this would be the proper thing for us to do. Business is not any too good now, and we might work ourselves out of the prescription business.

MR. CORNING: We all seem to have our opinion on this matter, and I think the best thing to do, as I have said before, is to submit it to the State Medical Associations and abide by their decision, and as I have said before, some want it and some do not, and whatever we do in the matter will call forth unjust criticism.

MR. DOHME: I think this is altogether a personal matter between the doctors and the druggists, and as only about one-half of the druggists take the trouble to put the label on, it seems to me it would be a useless piece of work to go before the medical societies about it.

MR. HYNSON: Some of the druggists put the labels on the bottles, and others do not, and some do not pay any attention to it

at all, but generally when the doctor requests it, the druggist puts it on. Now the question is, whether we shall put it on when the doctor writes for it, or only when the patient asks for it. It seems to me that there is no difference between putting a copy on the bottle and giving a separate copy to the patient.

MR. CORNING: I do not think that this is a question that we ought to settle, but that it should be decided by the doctors and medical societies. The doctors have a code of ethics, and I think they are perfectly competent, and if they can reach a common ground they can settle the whole thing.

MR. HYNSON: Then I withdraw my motion and move that a committee be appointed by the incoming President, and the matter referred to them, and that they confer with the State Medical Societies with an object of settling this question.

Passed.

PRESIDENT: Mr. Schulze, chairman of Committee on Pure Food and Drug Law, will now read his report:

REPORT OF COMMITTEE ON PURE FOOD AND
DRUG LAW.

OCEAN CITY, MD., July 13th, 1899.

To the President and Members of the Maryland State Pharmaceutical Association,

Your Committee on Pure Food and Drug Laws beg leave to report that they were in attendance on the Pure Food and Drug Congress, which convened at Washington, D. C., from January 18th to 21st.

The meetings were held at the Columbian University and were attended by representatives of twenty National and about ninety State and local organizations.

The first session was called to order by the President, Hon. Jos. E. Blackburn, of Ohio, on Wednesday afternoon, January 18th, and after Prayer by Rev. Byron Sunderland addresses of welcome were delivered by Hon. Jno. B. Wight, President of the Board of District Commissioners and Hon. Frank Hume, President of the Local Association; President Blackburn submitted his address and then introduced Hon. Jas. Wilson, Secretary of Agriculture, who made an able and earnest speech commanding the work of the Congress, and showing the necessity

for National legislation, as thereby the Inter-State and Foreign Traffic could be regulated, which could not be done by local or State laws.

A number of resolutions were introduced and referred to the Committee on Resolutions which was named later during this session.

The following Committees were appointed each containing one delegate from each State represented; and in the absence at the time of other organizations from Maryland, our State was represented on each by a branch of the Drug Trade as follows: Committee on Organization, Mr. Chas. E. Dohme; Committee on Order of Business, Mr. H. B. Gilpin; Committee on Resolutions, Dr. A. J. Corning.

On the morning of the second day Hon. Marriot Brosius, (patron of the Bill in the House) made an eloquent and able address urging aggressive action in endeavoring to have the bill become a law.

In the afternoon addresses were made by Prof. Wiley, Chemist for the Department of Agriculture and Prof. Beal, President of the Ohio Pharmaceutical Association. After this session the Committee on Resolutions met to take action on the various amendments added to the bill; and the drug trade, as well as the public, are to be congratulated, that on this Committee we were represented by Dr. A. J. Corning, as a resolution had been offered by the delegates of the Proprietary Medicine Manufacturers, which would have excluded their preparations from the bill; but Dr. Corning ably and earnestly showed the injustice of the resolution, in which effort he was seconded by Dr. Vogel, of the Agricultural Department, who stated that out of 400 cases of morphine habitues he had lately investigated in the District of Columbia, he found 300 had been unconsciously caused by so-called harmless patent or proprietary medicines; and through the influence of these two gentlemen the measure was defeated.

It is deemed of the greatest importance by your Committee that the Maryland Pharmaceutical Association, as such, urge upon our Representatives in Congress the passage of this bill, also that the individual members of the Association do likewise.

During the last session of Congress the bill had been reported favorably in the Senate by the Committee on Inter State Commerce, but owing to the many duties placed upon that body by our late war, and the brevity of the session no further action was taken. However, it will be necessary for us to be on the alert so that the bill is not so amended by its enemies, as to prove a detriment to the drug trade and public, instead of a benefit.

As Maryland is not only a dumping ground for incompetent Pharmacists, through lack of a proper Pharmacy Law, but also offers a safe rendezvous for the nefarious trade of food and drug adulteration, we would urge upon the Maryland Pharmaceutical Association, to have a bill similar to that of the National Food and Drug Congress (a copy of

which is herewith submitted), introduced at the next session of our State Legislature for regulating these matters in our State.

In conclusion, we desire to state that all the officers of the National Pure Food and Drug Congress serve without pay, but there are certain other expenses to be met by voluntary contributions, hence if our Association can see its way clear to contribute toward this noble cause, we would recommend it be done to the best of the Association's ability.

Respectfully submitted,

LOUIS SCHULZE,

THOS. L. RICHARDSON, M. D.

A. EUGENE DEREEVES.

DR. DOHME: I think there are several recommendations that should be considered in the report just read. First, to introduce a State Bill for the benefit of the Medical Association. Would not this interfere with the Pharmacy Law, which we are trying to get passed.

MR. SCHULZE: I do not see where this would interfere, but of course if it does, we will have to drop it.

DR. CULBRETH: Regarding this, I wish to say, that I remember very distinctly one time calling on a member of the Legislature regarding the Pharmacy Law, and he said to me: "You have just got one law, you ought to be satisfied;" and I think in regard to this question, the best thing for us to do is to amalgamate the two bills, and in this way accomplish both ends at the same time, whereas if we try to get two bills passed, we may fail in both.

MR. SCHULZE: I think Dr. Culbreth's suggestions are very good, and I think a committee should be appointed to see that these are accomplished.

DR. DOHME: I agree with Mr. Schulze and I move that a committee be appointed by the incoming President on a Pure Food and Drug Law, with instructions to look after our interests.

Passed.

MR. SCHULZE: What about the contributions to the Pure Food Congress?

MR. DOHME: The various commissions have asked us for funds several times, and as the object of the Congress is a very good one, I think we ought to donate something.

MR. BECK: I think that the words of Mr. Dohme are well put and I agree with him, that we ought to do something. It is necessary that the committees have funds. I think that we could afford \$10.00, and I move that the Association contribute this amount to the Pure Food and Drug Congress.

Passed.

~~—~~ PRESIDENT: We will now take up Query 5, by Dr. A. R. L. Dohme on Oil Savin, Sandal, Juniper, etc.

“Query 5.—Oils of Savin, Juniper, Sandal and Eucalyptus are grossly adulterated. A report upon those found in the market would be interesting.”

ADULTERATION OF OILS.

BY A. R. L. DOHME, PH. D.

Oils of Savin, Juniper and Eucalyptus being terebinthinate oils are most likely to contain turpentine oil as an adulterant, especially in view of the cheapness of this oil. This oil was hence first studied and its literature gone over so as to be able to recognize its presence in the other oils. There are three kinds of turpentine oil in use, viz:

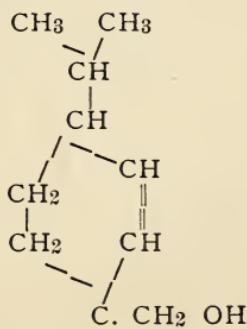
1. French or Venetian Turpentine Oil consisting mainly of laevogyre Pinene.
2. American Turpentine Oil consisting mainly of dextrogyre Pinene.
3. Russian and Swedish Turpentine Oil consisting mainly of dextrogyre Pinene together with some higher boiling terpenes.

The U. S. P. requires a boiling point of 155 to 170 degrees C. and a sp. gr. of 0.855 to 0.870 while Schmidt in his *Pharmaceutische Chemie* requires 160 degrees C. and sp. gr. of 0.860 respectively. Our oil had a sp. gr. of 0.870 and a boiling point of 160 degrees C. without any fore-runnings or residue and its solubility satisfied all the requirements. Hence this oil as bought in commerce is not adulterated as was to be expected, as it is even cheaper than the “dreaded” cotton seed oil.

Savin Oil. (*Oleum Sabinæ*.)

The pure savin oil is practically unknown and would not sell if made and offered for sale, as it costs about \$4.00 a lb. and the oil usually bought sells for about \$1.00 a lb. Having distilled this as well as most other volatile oils myself in a large way, I speak from experience in this matter. Pure savin oil has a decided brownish-green color, and is quite penetrating in odor and dense to semiviscosity. Authorities differ somewhat on the figures as the following will show:

Sp. gr. at 15 degrees C.—U. S. P.—0.910 to 0.940, Schimmel & Co. 0.905—0.920, Schmidt 0.895 to 0.920. Boiling Point National Dispensatory 160 degrees to 200 degrees, the greater portion distilling over at the latter figure; Schmidt 155 degrees to 160 degrees; Beilstein 155 degrees to 161 degrees. Solubility—it should be soluble in equal volume of alcohol to distinguish it from oils juniper and turpentine, also in equal parts of glacial acetic acid. Emil Fromm, Berichte der Deutschen Chemical Gesellschaft 31, page 2025, 1898, has carefully studied savin oil during the past year, and his results differ from any of the above and are no doubt correct. The first portion distilled over at under 195 degrees C. and consisted of terpenes mainly pinene; the second portion went over between 195 degrees and 235 degrees C. and consisted of a mixture of two esters of an alcohol of formula $C_{10}H_{15}OH$ which he named Sabinol, the acids in combination with it being acetic acid, and a high boiling acid, boiling at 247 degrees and as yet undetermined; the third portion went over between 235 and 310 degrees C. and consists of resins including Wallach's Cadinene. The value of savin oil depends upon this alcohol sabinol whose formula Fromm has determined:



The Sabinol itself boils at 208 degrees C. and the mixture of its two esters as found in oil savin at 222-224 degrees C. It is hence easy to see that when the U. S. P. and other authorities give 155 to 170 degrees as the boiling point of savin oil, they are not referring to pure savin oil and their requirement and figures need revising. Pure oil that I had distilled, and which possessed the dark green-brown color boiled between

195 and 300 degrees C. Formulas in which savin oil has been used and is to day, are based on the adulterated article called for by the U. S. P. and other authorities, and it is hence likely that if the pure savin oil were used in these doses, that some unexpected and unlooked for results would happen. It is hence perhaps useless to add that, I did not use this oil in the quantities called for by my formulas, but used only the proportionate amount that the U. S. P. oil would contain. The product I bought in the open market and the kind you would get wherever you would buy it no doubt gave the following results (determinations made in duplicate): Spec. grav. 0.884. Distilled 100 c. c. which yielded the following fractions; (1) under 100 degrees C.—1 c. c., (2) 100-167 degrees C.—62 c. c. pale yellow in color, (3) 167-180 degrees C.—10 c. c. darker yellow, (4) 180-200 degrees C.—4 c. c. darker yellow; (5) above 200 degrees C.—23 c. c. brown in color with spec. grav. 0.95. Hence only about 20% was savin oil and the balance was turpentine oil. We hence see that while the U. S. P. Savin Oil is not a pure oil, this article bought in the market is much less so as the spec. grav. and boiling point show.

Sandal Oil. (*Oleum Santali*).

More work has been done on this oil than most others because it is higher in price and can hence more profitably be adulterated, and because there are several varieties of it, made from sandalwood obtained from different parts of the world and which are quite different one from the other.

The U. S. P. requires the oil to be *lævogyre* to distinguish it from Australian Sandal Oil (sp. gr. 0.953) and West Indian Sandal Oil (sp. gr. 0.965) both of which are slightly, but distinctly *dextrogyre*, i. e., turn the plane of polarized light to the right. It must be completely soluble in alcohol and react slightly acid to litmus. 1 c. c. when mixed with 10 c. c. of 75% alcohol, must make a clear solution. The adulterations are mainly copaiba and cedar oil. The latter can be detected by mixing 1 c. c. of oil with 1 gramme conc. cupri-ammonium solution and 4 c. c. water, when if pure there should be formed a white soap while the presence of cedar oil will cause the soap to turn green.

Boiling Point.—U. S. P. gives none. Dispensatories give 214 degrees to 255 degrees C. Chapoteaut gives 300 to 340 degrees C. and Schmidt gives the same.

Specific Gravity is bound to vary even in pure oils as the nature of the wood is bound to vary even from the same locality and consequently the per cent. of terpenes, of santolol, etc. The U. S. P. requires 0.970 to 0.978. The following gravities show the variability of sandal oils from different localities :

African.....	Sp. Grav.	0.969
South Australian.....	"	1.022
West Australian.....	"	0.953
West Indian	"	0.962-0.967
East Indian.....	"	0.975-0.980

The oil I distilled from East Indian logs and branches of sandal-wood gave a spec. grav. of 0.981 and 74 c. c. distilled over at 290 degrees C. possessing light yellow color. While 26 c. c. remained as a brownish-yellow viscous oil, which showed some fluorescence, and consisted of a mixture of the two most efficient and odoriferous constituents of sandal oil, viz: Santalal $C_{15} H_{24} O$ (b. p. 300 degrees C.) and Santalol $C_{15} H_{26} O$ (b. p. 310 degrees C.). Its spec. grav. was 1.002. The oil I bought in the open market gave a spec. grav. of 0.952 and gave fractions as follows: (1) under 260 degrees C—3 c. c. (water); (2) 260-270 degrees C—70 c. c. (sp. grav. 0.948); (3) 270-280 degrees C.—18 c. c.; (4) over 280 degrees C—9 c. c. This 9 c. c. had spec. grav. 0.998. It hence appears that this sample of sandal oil consisted of West Australian Sandal Oil and not East Indian as it should. In other words the self distilled oil from East India logs contained about 26% of santalol and santalal while the purchased trade article only contained 9% of these, and was hence greatly inferior. It has become generally recognized that most essential oils consist of a solution of some one or more active principles to which they owe their virtue or their odor in various terpenes as solvents. In this case the 91 and 74% respectively were solvents for the 9 and 26% of active substances santalol and santalal. Neither oil gave any evidence of containing any cedar oil or copaiba. What the 270 to 290 degrees boiling terpene was, we did not determine. While no official standard of santalal or santalol is required by the U. S. P. it is evident that the trade article examined, either has been diluted with some terpene or is not an East Indian Sandal Oil, but a West Indian Oil and considerably inferior.

Juniper Oil. (*Oleum Juniperi*).

The literature upon this oil is comparatively scanty. It is a colorless oil which when diluted with four times its volume of alcohol, becomes turbid. It is neutral to litmus or perhaps a trifle acid and soluble in equal parts of carbon bisulphide. Lack of literature and definite statements is no doubt due to lack of study of the oil and of knowledge of its constituents. The U. S. P., Schmidt, and Schimmel & Co. give us no boiling points, and the dispensaries give for oil from fresh berries 155 degrees and old berries 205 degrees C. The U. S. P. requires a sp. gr. of 0.850-0.890, as do Schmidt and Merck, but Schimmel & Co. gives 0.865-0.885.

The sample oil examined was neutral to litmus and gave a spec. grav. of 0.865. On distillation it gave the following fractions: (1) under 150 degrees C—4 c. c. (water); (2) 150-170 degrees C—52 c. c. (mostly at 162 degrees of spec. grav. 0.851 and hence turpentine oil); (3) 170-190 degrees C—16 c. c. (colorless); (4) 190-200 degrees C—8 c. c. (colorless); (5) 200-250 degrees C—9 c. c. (yellowish); (6) over 250 degrees C—11 c. c. (yellow).

Until we know more about the constituents of Juniper Oil and the amount of pinene or turpentine oil it should normally contain, it is difficult to give any definite statement as to the amount of adulteration in it. Apparently this sample contains 50% of turpentine oil, but whether or not this should be present in a pure Juniper oil requires a careful study of the oil that the experimenter has himself distilled from the berries. The 50% that was obtained above 162 degrees was undoubtedly pure juniper oil, but whether juniper berries will besides this normally yield 50% of turpentine oil is a question we cannot answer here. The U. S. P. Committee can easily investigate it and decide. They certainly should give more definite requirements for this oil. In fact it appears to us that the time is ripe for a study of all these oils by the committee, and a definite statement of the per centage of all ingredients and their name and properties in the *Pharmacopœia*. It can easily be done, and in view of the frequent adulteration of oils, expense and time should not stand in the way.

Eucalyptus Oil. (*Oleum Eucalypti*.)

This oil varies very much in its composition, odor and properties according to the member of the Eucalyptus family it is distilled from. Most of it is probably obtained from Australian Eucalyptus. The spec. grav. of oils of various sources are pretty constant and vary between 0.915 and 0.925 while the boiling points vary considerably, thus from *Eucalyptus Amygdalina* 170-180 degrees C., *E. globulus* 170 degrees, *Backhausia Citriodora* 223-233 degrees C. The active ingredient is of course Eucalyptol boiling at 175 degrees C., formula $C_{12}H_{20}O$, dextrogyre and having a rosaceous odor when diluted. When treated with nitric acid it yields a crystalline substance, an acid similar to camphoric acid. If the eucalyptus is obtained from Australian oil, it is lœvogyre, smells turpentiney and is much cheaper and less valuable. The oil we examine had a spec. grav. of 0.915 and 100 c. c. when distilled gave: (1) under 167 degrees C—5 c. c.; (2) 168-175 degrees C—86 c. c.; (3) over 175 degrees C—9 c. c.; fraction (2) being colorless and fraction (3) yellowish in color. The spec. grav. of fraction (2) was 0.912 and it was hence probably an oil distilled from *eucalyptus globulus*. As 86% of it was eucalyptol it is hence a very good oil and was not adulterated. Of the four oils examined, the savin oil is adulterated,

the sandal oil either adulterated or inferior and the juniper and eucalyptus pure.

During the reading of paper by Dr. Dohme, a large delegation of teachers came in.

MR. HYNSON: I have been requested by the ladies to express their appreciation of Dr. Dohme's "oily tongue," and in view of this just appreciation, I think it should be responded to, as they have taken so much interest in our Association as to honor us with this visit. I think there is one of our members who understands this matter very well, as all of us know, and as he he has made such bright speeches on the female question at our previous meetings, I would ask Dr. Culbreth to respond. (Applause).

DR. CULBRETH: I have nothing prepared on this matter, but I must say that, I am and I know that we all are, glad to have the ladies with us, as they are always in our hearts. It is a rather strange thing that wherever the ladies are the men want to be, and wherever the men are, the ladies generally seek. We are glad that they have taken enough interest in the Association to visit us and that they have appreciated Dr. Dohme's paper and "oily tongue." I hope that they will be able to be with us at some of the future meetings of this Association. (Applause).

MR. ALPERS: Mr. President, if as a visitor I may be granted the privilege of the floor for a few moments, I wish to express my thanks to Dr. Dohme and my sincere appreciation of the excellent paper that he has just read. No one who has not undertaken similar investigations has any idea of the difficulties and intricacies of such work. As we all know, it was formerly supposed that each plant contained an oil of a definite composition different from those of other plants; but since the patient and excellent investigations of ethereal oils by Wallach and others, we have learned that these oils consist of mixtures of hydrocarbons and derivatives, like alcohols, aldehydes, acids, etc., many of which are isomeric or even identical. There is, however, no strictly delineated method of investigation, and each oil has to be treated different from the other. The investigator, therefore, must grope his way and many hours

and days of searching are lost by obtaining negative results. The time will probably come when these oils will not be official themselves, but only the terpenes gained from them, on which their characteristic properties seem to depend. It is on account of these difficulties, which I personally have experienced in work of similar nature, that I congratulate Dr. Dohme on his paper, which will be a valuable addition to our pharmaceutical literature.

PROF. CASPARI: In connection with the reading of this paper, there is a good work on oils soon to be published by a house in Germany, which I think will be of great value.

PRESIDENT: We will now take up Query No. 6:

Query No. 6.—“Glycerin made from soap-lye is said to be inferior and not as pure as that made by candle-makers. This is probably mere prejudice. Comparative tests are invited,”

which will be answered by Prof. Chas. Caspari, Jr.:

GLYCERIN.

BY CHAS. CASPARI, JR.

Is Glycerin made from Soap-Lye Inferior to that Produced by Candle Manufacturers?

The claim has been frequently advanced by large dealers in glycerin, that the article obtained from the refuse waters of soap manufacture is vastly inferior to the glycerin resulting from the decomposition of fats in the manufacture of candles, and that hence the former is not suited for use in pharmaceutical preparations. Advantage is taken of this claim to demand a higher price for the so-called candle glycerin and some pharmacists are led to believe that the so-called soap-lye glycerin is unfit for use.

While the quality of commercial glycerins has been the subject of frequent examinations and the results thereof can be found in several of the published Reports of Annual Proceedings of National as well as State Associations, it appears that thus far no investigation has been undertaken, or if so, the writer is not aware of its publication, with the view of comparing the respective qualities of soap-lye and candle glycerins as offered to the drug trade at present.

Leaving out of consideration the character of the crude glycerin obtained by either process, which is known to be impure in both cases,

the writer procured in the open market samples of different brands, domestic as well as foreign, of so-called pure colorless glycerin and then endeavored by a series of well known tests to establish the relative merits of the several commercial varieties, having previously obtained from the manufacturers, as far as possible, the necessary information as to process employed.

The requirements of the U. S. Pharm. are intended to insure a quality of glycerin suitable for all medical and pharmaceutical purposes, and very wisely no restrictions are placed on the source or process of manufacture, it being a well-established fact that all glycerin, whether derived from vegetable or animal fats or oils, is chemically identical and its final purification somewhat variable with the character of the crude product. Glycerin meeting the official requirements is easily obtainable if pharmacists will only take the trouble to apply the tests and then reject all that does not respond favorably.

For convenience in tabulation of the results, the samples examined were numbered respectively 1, 2, 3, 4, 5, 6, 7, 8 and 9; of these, 5 samples were American products, 2 samples German products and 1 sample each of English and French manufacture. Nos. 1, 3, 8 and 9 were claimed to be candle manufacturer's glycerin, while Nos. 4, 5 and 7 were claimed to be soap manufacturer's glycerin; about Nos. 2 and 6 no definite information was obtainable, but it is assumed that neither of the two varieties is a soap-lye glycerin. The following well known manufacturers of glycerin were represented by the samples obtained: Proctor and Gamble, Colgate & Co., Price's Candle Works, Grasselli Chemical Co., Marx & Rawolle, Boehringer & Sons, Wm. J. M. Gordon, Schering & Co. and Kirk & Co.

Specific gravity in each case was determined by means of a Westphal balance and is recorded as compared with distilled water having the same temperature as the glycerin, namely 17.5° C. (63.5° F.)

In the test for readily carbonizable impurities, the U. S. Ph. directs that a mixture of equal volumes of glycerin and of concentrated sulphuric acid, on being gently warmed, shall not acquire a dark color. When such a mixture is made and stirred with a glass rod, considerable heat is developed (a rise of temperature from 25° C. to 94° C., 77° F. to 201.2° F., was observed) and hence the condition of gentle warming can not be maintained. All 9 samples under these conditions immediately acquired a decided color, although in no case very dark, and a modification of the official test was therefore applied and more satisfactory results secured, as shown in the table below. Equal volumes of glycerin and concentrated sulphuric acid were thoroughly mixed in a test tube by means of a glass rod, while cold water from a tap was allowed to flow over the tube constantly; when the admixture was

completed and the tubes and contents at room temperature, the tubes were all placed in a water-bath heated to 55° C. (131° F.) and kept at that temperature for 10 minutes; observations as to color were made both in the cold and warmed mixture.

In testing for acidity with sensitive litmus paper, a solution of glycerin in an equal volume of water was employed and for comparison a like mixture to which 0.02% of sulphuric acid had been added, was used.

When applying the silver nitrate test, reaction was noted at the end of 5 and 15 minutes and 24 hours.

Besides the Pharmacopœia tests applied, a mixture of equal volumes of glycerin and 15% sodium hydroxide solution was heated in a test tube to incipient ebullition; neither color nor odor was developed in any of the samples examined. One cubic centimeter of a 5% cupric sulphate solution was then added to the contents of each tube and the mixture again heated; a clear deep blue solution resulted in every case and remained so for several days; thus showing the absence of glucose.

Not one of the samples examined was absolutely free from fixed impurities after gentle ignition of about 6 Cc. in a platinum dish and subsequent heating of the dish to redness. In no case, however, was the residue more than a film, brownish at first and grayish subsequently.

Absence of heavy metals, calcium salts and oxalic and sulphuric acids was shown in every sample, when treating a 10% aqueous solution of the glycerin with ammonium sulphide, ammonium oxalate, calcium chloride and barium chloride test solutions respectively.

No. of Sample	Specific Gravity	Re-action	Dilute H ₂ SO ₄ Test.	Concentrated H ₂ SO ₄ At 20° C.
1	1.258	Neutral	No Odor	Slight Yellowish Tinge
2	1.260	"	V. S'g't Odor (not acidulous or offensive)	" " "
3	1.258	"	No Odor	Colorless
4	1.252	"	Slight Odor (not acidulous or offensive)	Brownish Yellow
5	1.261	"	" " "	Colorless
6	1.262	"	" " "	"
7	1.260	"	" " "	"
8	1.258	"	V. Slight Odor	"
9	1.258	"	" " "	"

Test Modified At 55° C.	Silver Nitrate Test.		
	After 5 Min.	15 Min.	24 Hours.
Yellowish Tinge	Clear and Colorless	Sl. Yellowish	Brownish Yellow
" "	Sl. Opalescent "	Colorless	Purplish
Sl. Yellowish Tinge	" "	"	Pinkish
Brownish Yellow	Clear	"	Sl. Yellowish
Sl. Yellowish Tinge	Sl. Opalescent "	Colorless	Pink
" " "	Clear	"	Pink
" " "	" "	"	Colorless
" " "	Sl. Opalescent "	"	Pinkish
" " "	" "	"	Colorless

The conclusion reached in this investigation is that good glycerin conforming to the pharmacopœial requirements can be obtained without difficulty and that the source of glycerin, whether soap-lye or candle manufacturer's residue, plays no part in the quality of the article offered for use in pharmacy.

MR. DOHME: I feel very much gratified that Prof. Caspari has prepared this paper. I know that he has gone to a great deal of trouble and research in order to get these facts, and it is a very valuable paper. There can now be no more songs of woe of the manufacturers in this country, about soap-lye glycerin. I have aherd the old song of not purchasing "glycerin made from soap-lye, because I would poison my customers," but this paper shows that the tables are to be turned on the singers. I can now say to them, that they had better go home and try to make their glycerin as good as the soap-lye glycerin. I move that a vote of thanks be tendered to Prof. Caspari, for his valuable paper.

Passed with applause.

MR. HYNSON: From the retailer's standpoint, I feel gratified to learn that the glycerins on the market are so pure. In spite of Prof. Base's assertions to the contrary, the retailer does make some occasional tests. We have bought Bower's Glycerin on the brand and after applying the Nitrate of Silver test, we found it not as pure as commercial glycerin.

PRESIDENT: Our Secretary, Chas. H. Ware, will now read a paper in answer to Query 8:

Query No. 8.—"Statistics are wanted on the extent of the use of the metric system in the writing of the prescriptions by physicians."

THE METRIC SYSTEM COMPARED TO OTHER WEIGHTS AND MEASURES.

BY CHAS. H. WARE.

At the last meeting of the American Pharmaceutical Association, Dr. Whelpley, states that out of 540,000 prescriptions not more than 6.27% were metric.

I have written return postals cards to a number of prominent druggists in various large cities, for data in regard to the use of the metric system by physicians; and from their replies I do not believe

one physician out of a thousand uses this admirable system of which John Quincy Adams says in his message to Congress about 75 years ago :

"The French System embraces all the great and important principles of uniformity, which can be applied to weights and measures. It is a system adapted by the highest efforts of human science, ingenuity and skill to the common purposes of all ; considered, merely as a labor-saving machine, it is a new power offered to man, incomparably greater than that which he has given to steam. It is in design the greatest invention of human ingenuity since that of printing. Its universal establishment would be an universal blessing."

But to narrow-minded people the adoption of foreign weights and measures would nearly amount to a National disgrace, implying that the United States cannot produce a good system of itself, and simply on this account, there is a deep-rooted prejudice and sentiment against the metric system.

The history of metrology is an interesting one. In ancient times there were probably, no definite measures of surface, or of capacity, only measures of length and weight. The measure of length, corresponding to the side of a square surface, was sufficient for denoting small areas, while large ones were indicated by natural limits or boundaries such as rivers, water-courses, the edge of forests and marshes. Measures of capacity were rare, almost all the commercial and monetary transactions were determined by weight, as still seen among the Oriental races. In fact large numbers of persons exist to-day to whom a measure of capacity is unknown. The primitive measures of length were the grains of corn placed length-wise, the finger breadth, or digit ; the palm-breadth, the span, the foot length, the cubit (from the elbow to the finger-tip) and sometimes only to the roots of the finger, the double cubit, the gird or girdle, the fathom (comprised in the reach of the two arms to their fullest extent, the step, the pace, the local acre-side, of 80 or 100 cubits, the itinerary measure, or mile of 1000 paces, the hour's march, or day's journey.

The Primitive measures of weight, were the weights of various grains : of corn, millet, rice, wheat, gunj, or abrus, more especially the last, on account of its wonderful uniformity in weight ; the weight of small shells, the weight of water, oil, wine, rice, wheat contained in a temporarily formed local cubic foot ; the load of a man, of an ass or camel. The second stage in the development of measure is denoted by the demand for greater exactness ; the personal measure of some chief, king, patriarch or high priest, then became reduced to actual standards and were introduced into the temples, the markets and public buildings ; and, the people could refer to them for comparison. In this stage a cubit was not a cubit of any individual, but become a standard unit. Cubit measures and units of weights based on cubic measure then

became possible. Such standards were few in numbers, perhaps two in length and two of weight, one large and one small, while the multiples and sub-multiples were mere matters of calculation arrived at in accordance with the habits and thought of the people and their chiefs and priests. Some Nations, especially the early Egyptians and the Chinese, counted and thought decimal, the Assyrians by sixties and Sixteenths, or shekels, the Romans by twelfths, inches or ounces of land measure; capacity, length and weight; while the races that obtained the ascendancy in modern ages, the Teutons in Europe, and the higher castes or races in India adhered to the binary, sub divisions, halves, quarters, eights and sixteenths, and arranged their multiples so as to admit of it.

Taking the digit or finger-breadth as the smallest personal unit of length, the proportions of the others to it, probably followed nearly this scale :

1 Palm = 4 digits.	1 Step = 40 digits.
1 Span = 12 digits.	1 Pace = 80 digits.
1 Foot = 16 digits.	1 Fathom = 96 digits.
1 Cubit = 24 digits.	1 Rod = 160 digits.

Apart from these simple measures for commercial purposes, there were also royal and sacred measures, almost always larger, for among an uncivilized people, bulk means power and awe, as shown in their big-bellied idols. In imitation of the kings and high-priests, the various trades then adopted measures of their own. Thus a single system was broken up into a mass of special systems, such as a monetary system, a jeweler's, a druggist's and an artisan's, and finally a scientific, an astronomical and geodetic, which lead to complexity.

In the English system of weights there are found 74 units having 56 names. The ounces, drachm and the grain are indefinite parts of an indefinite whole; the pound averdupois is heavier than the pound troy, and the ounce troy is heavier than the ounce averdupois. In the confusion, numbers lose their identity; a dozen may even mean sixteen, 28 signify 25, and 112 signify 100, thus making the whole less than the sum of its parts. A gallon of wine is not as much as a gallon of milk, and a ton of coal is sometimes one weight and sometimes another.

The bushel for measuring products of the earth has 130 different sizes. To quote from the Report of the Committee on Weights and Measures to the National Academy of Sciences, January, 1866:

"But habit makes us so submissive, even to constant inconveniences that your committee submit herewith 3 tables showing the perplexities and embarrassments involved in our customary weights and measures in every effort for their conversion and even in all efforts of the memory to retain the relations of their several parts. They multiply the arithmetical rules required, embarrass mathematical

calculations, clog the accounts of trade, increase the labor of teachers and scholars alike in our school, absorb in their acquisition a great portion of the time which would be more usefully applied to other studies, and necessarily appreciate the cost of a common business education. With a decimal system, all the ordinary transactions of popular trade could be computed by any person familiar with the simplest relations of numbers and without pencil or paper to aid the mind, now embarrassed by their complexity.

But with the actual system in use, in the table of lengths, we ascend by the factors 12, 3, $5\frac{1}{2}$, 8, and 3, or else by 7 23-25, 25, 4, and 80. In weights we have 3 series nearly distinct averdupois, troy and apothecary ; the only common unit is the grain. In the first, we ascend from the grain by the factors 27 11-32, 16, 16, 25 or 28, 4 and 20 ; in the second by the factors 24, 20, 12 ; in the third by 20, 3, 8 and 12.

In the measure of capacity there are simple relations between the several liquid measures, as well as between the dry measures, and also the cubic measures. Yet, in compounding the three different series, there are no useful relations whatever. Hence, none but professional persons can be expected to master and retain a knowledge of the arithmetical intricacies of our present scheme as taught in schools and used in practical life.

In marked contrast is the metric system. It is orderly, simple and perfectly harmonious, having useful relations between all its parts. It is based on the metre which is its principle and only arbitrary unit, which is a measure of length and is very nearly one ten millionth of the distance on the earth's surface from the Equator to the Pole. It is very nearly 39.37 inches long. There is a surface equal to a square, whose side is ten metres ; it is nearly 4 square rods. The litre is the unit of measuring capacity and is equal to the contents of a cube whose edge is a tenth part of the metre. It is a little more than a wine quart. The gramme is the unit of weight and is the weight of a cube of water, each edge of the cube being $1\text{-}100$ th of the metre. The gramme is equal to 15.432 grains. The Stere is a cubic metre. Each of these units is divided decimal and large units are formed by multiples of 10, 100, etc. The successive multiples, are designated by the prefixes deka, hecto, kilo and myria ; the subordinate parts by deci, centi and mille, each having its own numerical significance.

The metric system originated in France, about the year 1795, and was intended for universal adoption. While it has been adopted by most of the European Nations ; in Great Britain and the United States its use is permitted and recommended, though it is not compulsory.

The compulsory employment of the metric system in France, dates from a law passed in 1837. In Portugal, in 1864. In Spain, in 1868. In the German Empire, in 1872. Austria, in 1876. In the Spring of 1869,

the French Government addressed a circular letter to all Governments with whom it had diplomatic relations, inviting them to send delegates to a scientific commission, having for its object a revision of the standard unit of the metric system.

At the second session, held in 1872, thirty States, including the United States, sent delegates, and the subject was fully discussed. In November, 1877, a resolution was passed by the United States House of Representatives, asking the heads of the Executive Departments to report what objections, if any, should be made to the adoption of the metric system by the United States. Most all of these reports were hostile to the metric system, showing that men like Wm. M. Evarts, Secretary of State; R. W. Thompson, Secretary of Navy; John Sherman, Secretary of the Treasury, and M. C. Meigs, Quarter Master General, had no sympathy with the movement. Probably on this account, in spite of the various memorials from universities and colleges of the United States; the petition of the Mayor, Judges and citizens of Baltimore, and several memorials from citizens in different parts of the Country, the United States Senate has never ratified the work of the French Commission.

PROF. CASPARI: The work of reporting on the use of the metric system has been before the American Pharmaceutical Association for a number of years. The druggists seem to be willing to adopt the metric system; the trouble is with the physicians. Sometime ago, I issued a letter to find out how these colleges stood. Out of 238 colleges, only 3 replied favorably and one of them was a woman's college; hence the average doctor knows very little about the metric system. The trouble of thinking has been done away with, some one else does it for them.

DR. CULBRETH: When I was appointed a Professor in a medical college, the first question I asked was: "What system of weights do you teach?" and they replied: "We don't teach any." I started in and drilled the students in the English system. Now as we are making some headway, the metric system is bound to be taught. A book I published some years ago, was criticized severely, because I used averdupois weights in my calculations, instead of metric, showing, it seems to me, that the metric system is now the only one to be used in works of science, and it is sure to be used, not only by scientists, but by the students who study their books.

MR. FOSTER: Our text books must be changed, then the doctors will use the metric system of weights. I think we ought to get it in use in this country. It is compulsory in other countries, and I think we ought to bring pressure on the Government to take some action in the matter.

MR. WARE: A great prejudice exists among teachers against the metric system, possibly, because it would throw a number of them out of employment.

PRESIDENT: We will now listen to a paper in reply to Query 9, by Dr. Dohme:

SYNTHETIC OIL OF WINTERGREEN.

Query 9. "In what respect does the synthetic oil of wintergreen differ from the natural oil, and which is preferable?"

BY A. R. L. DOHME, PH. D. AND H. ENGELHARDT, PH. D.

The question whether the synthetic wintergreen oil or methyl salicylate is equal to the natural oil from gaultheria procumbens or betula lenta, is often asked, and many are of the opinion, that the natural oil is to be preferred, because the synthetic is claimed sometimes to develop an odor of carbolic acid on standing, and thus spoil its value as a flavoring agent. There can be no doubt that if pure, the synthetic oil is preferable, for it is all methyl salicylate while the natural is not, containing only about 90 to 95% of this substance. Like every other product, methyl salicylate is apt to be impure, but because a substance like potassium iodide sometimes contains some iodate or other impurity, is no reason why it should never be used, and the same holds for methyl salicylate. When one buys a substance, one should see that it is pure, and not rail at the substance, but at the vender or manufacturer in case it is not. Since the advent of the artificial oil at so much lower prices than the natural, the distillers of the latter in the rural districts, unfortunately, have become aware of the existence of the same and have not infrequently bought it, mixed it with their natural oil and obtained natural oil prices for it. This is one reason for preferring the artificial oil. We obtained a sample of an unmixed natural oil and compared it with a pure synthetic product, made by a reliable manufacturer. The U. S. P. requires the oil to be laevogyre, boiling point 218-221 degrees C. and spec. grav. 1.175-1.185. It is to be neutral and on heating carefully with strong nitric acid, should yield crystals. Schmidt states, it contains 90% methyl salicylate and 10% gaultherilen (b. p. 160 degrees C.) and has Sp. gr. of 1.177. The

natural oil we examined had a slightly yellow color, was neutral to litmus, dissolved completely in glacial acetic acid and with strong nitric acid, gave crystals. On adding some nitric acid (Sp. gr. 1.35) a red color was produced, which according to Schmidt indicates the presence of sassafras oil. Its spec. grav. was 1.181 and 100 c. c., on distillation gave: (1) under 216 degrees—4 cc; (2) 216-224 degrees—92 cc; (3) residue 4 cc. This oil, hence, contained about 92% methyl salicylate and about 4% gaultherien. What the 4% of residue was, we did not determine. Spec. grav. of fraction (2) was 1.177. The *synthetic oil* we examined was colorless, completely soluble in alcohol, carbon bisulphide and glacial acetic acid; was neutral to litmus. Nitric acid (sp. gr. 1.35) gave no red color, hence, there was no sassafras oil present. Sp. grav. was 1.186. Distillation (1) under 210 degrees C.—3 cc; 218-219 degrees C.—96 cc; (3) residue, brownish yellow. The spec. grav. of fraction (2) was 1.183. From this we see that this oil contains 96% methyl salicylate, about 3% water and 1% of some unknown substance, probably decomposition product, due to the direct flame under the distilling bulb. Of the 3% of water, probably some was oil, as this is readily carried over with the water, and hence, this oil we might say contained 98% of methyl salicylate. There was certainly more than in the natural and no adulteration. We noticed no foreign odor, and none was left after a drop had evaporated from bibulous paper.

There can, hence, be but one answer to this query—the synthetic oil is preferable, independent of the question of price and doubly better on account of the great difference in price. As the synthetic oil is made from salicylic acid which in turn is made synthetically from phenol or carbolic acid, it is but natural that a poorly made product might contain some carbolic acid. In buying the synthetic oil, put a drop on bibulous paper and if after a few moments you detect an odor of carbolic acid—reject the oil; if not, then use it, and feel when you are doing so that you are getting more odor per drop by 6% than from the natural oil and at the same time saving fifty per cent.

MR. WIESEL: I move that this valuable paper be accepted.

Passed with applause.

PRESIDENT: Query 10: "The powdered drugs offered the drug trade are a fertile field for adulteration, and an examination of some of them would no doubt develop interesting results," has been answered by Prof. Base, yesterday, so we will now take up Query 12.

PRESIDENT: I have prepared a paper on this query, and if Vice-President Schrader will take the chair, I will now read it:

Query No. 11.—“It is claimed that 1-10 of one per cent. of salicylic acid will keep all eye waters or aqueous solutions, such as cocaine, etc., that frequently develop floccules and fungous growths and is not deleterious in any way. Reports upon this desired.”

SALICYLIC ACID IN EYE WATERS.

BY ROBT. S. MC KINNEY.

On being requested to answer this query, I decided that the only satisfactory way to do so would be by experiment. I therefore proceeded to prepare five solutions, such as are commonly used for eye washes, viz: Cocaine, Atropin, Zinc Sulphate, Boric Acid and Silver Nitrate. These were prepared *without* Salicylic Acid and designated respectively as solutions No. 1, 2, 3, 4 and 5. I then prepared five similar solutions *with* the 1-10% solution of Salicylic Acid and designated these as solutions a, b, c, d and e. Samples of these solutions I have here for your examination.

In both instances the solutions were carefully prepared with *boiling* distilled water and filtered through paper and a plug of absorbent cotton in the bottom of the funnel.

In the case of solution e, of course, the Acid could *not* be used with the Silver Nitrate, so this is practically out of the comparison.

In the trial of the other solutions the ones containing the Acid appeared to be more irritating than those without it. The trials, however, were made on a well eye, whether the effect would be the same on a diseased eye, of course, I cannot tell; but I think it would.

After allowing the solutions to stand side by side on a shelf in my store for several weeks, I made a comparison of their appearance and found all to be perfectly clear and without any trace of floccules in them and could detect no difference in those made with the Acid and those without it.

I therefore, draw the following conclusions: First, that the addition of the Acid is objectionable, making the solution more irritating to the eye and, Second, that the solution if carefully made, will keep as well for a reasonable time without it. Of course, all the utensils used should be thoroughly sterilized and nothing but distilled water used, and this perfectly boiling.

On examining these solutions I find that since packing them to bring them here, about two weeks ago, the solution No. 1, or Cocaine, without the Acid, *has* developed two floccules. I do not think, however, that this destroys my argument, as an eye wash is not supposed to be

kept forever, but used in a short time. The patient also should exercise proper care that no foreign substance be introduced while using.

Should any one desire to use Salicylic Acid in making these solutions, great care must be taken that no trace of Iron Salts come in contact with them, a slight stain of Tr. Ferri Chlor. on the graduate, scarcely perceptible to the naked eye, will be sufficient to make the solution a decidedly pink color.

PROF. CASPARI: I find, Mr. President, after examining these solutions carefully, that the solution of cocaine with salicylic acid is all right, but all the others have changed.

DR. CULBRETH: Who originated this Query?

DR. DOHME: One of the Medical Journals had a very exhaustive article on the subject.

MR. CORNING: The Retail Druggists are not concerned in keeping solutions indefinitely. I think it is rather a stretch of nicety to use antiseptics in eye solutions, and it is much better for people to suffer a loss of 25 cents, when the solutions changes, for a fresh one.

MR. HYNSON: I don't pretend to know what Mr. Corning is talking about. I have great trouble with solutions, by their being contaminated by the pipette, but I have found by using a maroon tip, the results were better.

MR. CORNING: I want Mr. Hynson to understand that the character of the prescription after leaving the store depends, on the people, there is so much carelessness and want of cleanliness and ordinary precautions are not taken.

DR. DOHME: Although Mr. Corning admits that 99 per cent. of the people in his neighborhood are not overscrupulous as to the liberal use of soap and water, it does not follow that such is the case in Mr. Hynson's neighborhood. Evidently the physician who wrote the paper, I have before mentioned, thought that antiseptics should be used in eye waters.

MR. HYNSON: I did not intend to say that I used antiseptics in every solution that goes out of my store.

MR. ALPERS: The same question has come up in our establishment. If the distilled water is boiled and the bottle is anti-septic, the solution will keep for a long time, unless the pipette gives trouble. It often causes the eye-water to deteriorate and spoil.

DR. CULBRETH: I think we have all listened to President McKinney's paper, with a great pleasure and profit, and I now make a motion that it be accepted with thanks and printed in the Proceedings.

Passed.

PRESIDENT: We will now listen to a paper by Prof. Chas. Caspari, Jr., in reply to Query 12:

Query 12.—“It is a fact that Belladonna plasters vary very much in strength of mydriatic alkaloids. There is no U. S. P. requirement, but manufacturers have adopted 0.35% as the standard for Belladonna Leaf. On this basis a plaster to be U. S. P. should contain 0.28% mydriatic alkaloids. What percentage of them exceed it?”

COMMENTS ON BELLADONNA PLASTERS.

BY CHAS. CASPARI, JR.

Mr. President and Gentlemen: In connection with this query, assigned to me by the Executive Committee, I beg to say that it does not seem to me desirable or even necessary to make a formal report. The U. S. Pharmacopoeia does not make any requirement for alkaloidal content of either the crude drug of belladonna leaf, or any of its preparations, and although some manufacturers of belladonna plasters have endeavored to establish a standard of alkaloidal strength, based chiefly on the requirements of the British Pharma. such standard has not been accepted by all manufacturers and in the absence of official requirements can scarcely be used as a standard of comparison in the examination of commercial products. It is well-known that the extracts of belladonna leaf of different manufacturers vary considerably in alkaloidal content, from 0.74 to 1.84% and over, and this fact alone will cause a great variation in the alkaloidal strength of belladonna plasters, even if all were made strictly in conformity with the U. S. P. formula and great care exercised to prevent loss of alkaloid by excessive heat. That the belladonna plasters of the market vary greatly in quality, has been shown repeatedly and nothing could be added by

further publication of a series of analyses unless the object be free advertisement of the various product and such, I take it, was not the purport of this query.

It may not be amiss to call the attention of the members of this Association once more to the record of analyses of belladonna plasters heretofore published, simply to show the condition of the commercial products during the past year. Mr. Macfarlane reports an examination of 48 samples, ranging from a trace to 0.468 per cent. of alkaloid; Mr. Carl Smith reports on 11 samples, showing a variation of from 0.042 to 0.594 per cent. of alkaloid; the speaker has examined 13 different commercial samples and found these to vary from 0.08 to 0.450 per cent. in alkaloidal content. Comment seems quite unnecessary in the face of such revelations and it is strongly to be hoped that the coming revision of our Pharmacopœia will combat this evil by demanding a liberal but fixed, or varying within narrow limits, percentages of alkaloid for belladonna leaf, and root, as well as for the various official preparations made from these drugs, convenient methods of assay being now well known.

DR. DOHME: I move that this paper be accepted and published in our Annual Proceeding.

Passed.

DR. CULBRETH: The following report of the Auditing Committee has been handed me to read.

REPORT OF AUDITING COMMITTEE.

OCEAN CITY, Md., July 14th, 1899.

The Committee having examined the Treasurer's Report, find it correct.

DANIEL BASE,
J. WEBB FOSTER,
JOHN M. WIESEL,

On motion the meeting then adjourned.

FIFTH BUSINESS SESSION.

The Fifth Business Session of the Association was called to order, at 10 A. M., Friday. President McKinney in the chair. The minutes of the previous session were read by the Secretary.

MR. SCHULZE: I move that the minutes be accepted and we proceed to the election of officers.

Passed.

PRESIDENT: We are now ready to hear the report of the Nominating Committee.

MR. HYNSON: The Nominating Committee after due consideration, begs to present the names of the following gentlemen for election.

ALFRED R. L. DOHME, PH. D., *President.*

C. C. WALTS, *First Vice-President.*

JOHN M. WIESEL, *Second Vice-President.*

C. H. MICHAEL, *Third Vice-President.*

CHAS. H. WARE, *Secretary.*

WM. M. FOUCH, *Treasurer.*

Executive Committee: $\left\{ \begin{array}{l} \text{J. WEBB FOSTER, } \textit{Chairman.} \\ \text{A. EUGENE DEREEVES,} \\ \text{JOHN G. BECK.} \end{array} \right.$

Respectfully submitted,

HENRY P. HYNSON, *Chairman.*

D. M. R. CULBRETH, M. D.

WM. C. POWELL.

The Secretary was requested to cast a ballot and declared them elected.

MR. CORNING: I move we now take up unfinished business.
Passed.

PRESIDENT: The amendments of the By-Laws and Constitution are the first thing to be taken up.

MR. HYNSON: At our last Annual Meeting, held at the Blue Mountain House, it was unanimously decided to amend and alter the Constitution and By-Laws. The changes, alterations and omissions have been published in our Sixteenth Annual Proceedings, and I move that they now be accepted.

Passed unanimously.

PRESIDENT: We will now appoint delegates to the Convention for the Revision of the United States Pharmacopœia; three delegates and three alternates.

PROF. CASPARI: This Convention will be held next May in Washington and we should elected men who will attend. I move that we proceed at once to elected delegates.

Passed.

DR. DOHME: I nominate Prof. Chas. Caspari, Jr.

MR. POWELL: I nominate Dr. A. R. L. Dohme.

MR. DE REEVES: I beg to nominate Mr. Hynson.

MR. CORNING: I move that these nominations be accepted.

Passed.

PRESIDENT: We will now appoint the alternates.

DR. DOHME: I beg to name as alternates, Dr. Corning, Louis Schulze and Wm. C. Powell.

DR. CORNING: As far as I am concerned, I appreciate the honor, because I feel confident that the other gentlemen will go.

SECRETARY: I move that these nominations be accepted.

PRESIDENT: You have heard the names of the gentlemen as delegates to the Convention for the Revision of the United States Pharmacopœia. Those who are satisfied with these gentlemen as delegates, will please signify so by standing up.

(Here the convention arose in a body. Dr. Corning no doubt feeling so "*Chairful*" at being elected a delegate, over-turned his "*chair*" as he arose and fell to the floor. (Laughter and applause.)

PROF. CASPARI: I move that our Secretary be instructed to send the names of the delegates to the Secretary of the Revision Convention, so that he may know in time.

Passed.

MR. HYNSON: I move that Prof. Caspari be instructed to secure enough money for the purpose of obtaining the views of our members regarding a Pharmacy Law.

So ordered.

DR. DOHME: The next order of business is to decide about the distribution of certificates. The certificates are ready and only await the decision of the Association.

PROF. CASPARI: Are there any of the certificates here, that we may learn the language of the certificate and what it contains.

DR. DOHME: This Certificate is as follows:

CERTIFICATE OF COMPETENCY.

MARYLAND PHARMACEUTICAL ASSOCIATION.

The Board of Trustees having thoroughly investigated the Character and Qualifications of.....
a member of this Association in good standing, hereby Certify's that he is a fit and competent pharmacist, as witnesseth my hand and the seal of this Association, this.....day of..... hundred and.....

PROF. CASPARI: We don't want to antagonize anyone. The question of being a qualified pharmacist, might open up questions that will cause trouble, and then I think the \$1.00 would be a drawback.

DR. DOHME: These are things to be considered and decided upon.

PROF. CASPARI: According to Article XII., of the By-Laws, a certificate of competency shall be issued only to members in good standing upon payment of one dollar.

MR. HYNSON: I would feel much pleased indeed to have the Association give me its endorsement, and I think the druggists who have the Certificates would enjoy the esteem and confidence of the public, in fact I am certain of it. If the Certificates were publicly displayed, they would have an elevating effect, and I think it would be to the interest of all druggists to have one of these certificates. The \$1.00 might be waived and the trustees be instructed to send them only to those who in their judgment were all right.

DR. DOHME: I move that the payment of \$1.00 be waived.

MR. CORNING: We must have another meeting to change the By-Laws.

MR. HYNSON: I move that we adjourn for three minutes.

Passed.

SIXTH BUSINESS SESSION.

The Sixth Business Session was called to order by the President.

DR. DOHME: I move that the reading of the minutes of the last session be dispensed with.

Passed.

DR. DOHME: According to Article XVII. of our By-Laws, the following alterations of Article XII. have been submitted in writing to the Committee on Laws, at the last session and approved: "upon the payment of one dollar" shall be omitted, so that the Article reads:

ARTICLE XII.

A certificate of membership will be issued to any member upon the payment of one dollar.

Any member actively engaged in dispensing physician's prescriptions, who has had not less than four years experience in the retail drug business and is deemed by the Board of Trustees to be a fit and qualified pharmacist, shall be entitled to a certificate of competency. The names of all members holding such certificates shall be published twice each year, in two daily papers of the City of Baltimore, provided, however, such members continue in good standing.

I now move that this alteration be approved.

Passed unanimously.

DR. DOHME: How shall these certificates be distributed?

MR. HYNSON: I move that the Trustees be instructed to mail one to such members who are in their judgment entitled to them.

Passed.

PRESIDENT: In my Annual Address I spoke about the lack of interest in the Association by the retailer and the need of local organizations, and I think these matters should be taken up and gone into.

DR. DOHME: How shall we proceed in answer to the President's message, in regard to local organizations?

MR. HYNSON: When I fathered the resolution of local organization, I meant to stick by it. When I take an interest in anything it seems to grow upon me, and this matter has developed to large size proportions. If we can get county members together it is bound to create an interest. I move that a committee of two be appointed by the incoming President, representing the Western and Eastern Shore, with the power of enlarging if necessary, to take up the question of local organization. The doctors have organized in the counties with good effect.

MR. DE REEVES: It would be impossible to form a local organization where I am, so few of the druggists take an interest in the Association. It might be a good idea to take a section of the Eastern Shore. I am willing to do whatever I can to further this matter.

MR. POWELL: If we form local associations, I think it would be a good idea to appoint committees on this matter and see that proper selection is made in regard to time and place of meeting. The druggists go to their county-seats certain times in the year on matters of business, and if these meetings, are held during court-week, I am sure they would be largely attended.

MR. HYNSON: After the committee on local organizations is appointed, the President can arrange matters, so that if any of the members have ideas in regard to this matter, that they think would be of value to the committee, in order that their work might be facilitated, they can send it to the committee in writing or give it to than verbally.

DR. DOHME: The next matter of unfinished business is about engaging a competent chemist at \$1,000.00 per year to be at the ser-

vice of the members of this Association, for the purposes of making analyses, and that the membership fee in view of this, be increased from \$2.00 to \$5.00. This matter was brought up at Frederick, but on account of our not having a quorum, nothing was done in the matter, as I thought it would be better to hold it over until this meeting. I now move that this Association employ a chemist at a suitable salary and the membership fee be increased to \$5.00.

MR. SCHULZE: I do not think it a good plan to increase the dues. I think it would be a great mistake to do so, anyhow just at this time. We would get few, if any new members, and a great many of our old members would drop.

DR. DOHME: Well to look at it in one way, it does seem that it would be disasterous, yet I thought that as the members get very little for their \$2.00 that they now pay, they would be willing to stand the increase in view of the fact that when we get a Pharmacy Law, and a Pure Food and Drug Law, they would have at their disposal a competent chemist. I do not think it is at all a theory, but I am inclined to believe that if it was tried it would be a success.

PROF. CASPARI: I rather think it is a good idea, but agree with Mr. Schulze, that now is not the time for it. If we succeed in getting a Pure Food and Drug Law, the State will have to appoint a chemist to whom our members could send articles to be analyzed, and thus they would derive the benefit, and save the expense of employing one. I do not think that we could get many members to pay the increase, and I am sure we would not be able to get a competent chemist for \$1,000.00 per year. I would not take the position for \$3,000.00 per year. We do not want to move too hastily in this matter. I think it is rather a dangerous proceeding at this time.

DR. DOHME: Well, even if we succeed in getting a Pure Food and Drug Law and the State does appoint a chemist, I rather think he would not hesitate to turn down articles that were sent him. No such public officer is at the service of the public to an unlimited extent.

MR. DE REEVES: I think we had better lay this matter over until our next Annual Meeting.

So approved.

PRESIDENT: The next unfinished business is the matter of cost mark.

SECRETARY: I want to say in regard to this, that I sent out 500 return postal cards, to get the views of the druggists, and if I remember rightly about 250 of the postals were returned to me filled out, and pledging the druggists to use this cost mark.

PRESIDENT: I think this is a question that should receive the attention of the Association, and if possible establish a universal trade mark, as it would be very profitable to the druggist. I remember one case where a party came to me to have a prescription filled for which a city druggist got 50 cents. I usually charge 35 cents for the same prescription. But as it had the cost mark on it, I was in a position to charge him the same.

MR. HYNSON: I see no difficulties to this, if we could get up a different one than that now in use. It must be original and peculiar, so that it would not interfere with your own private mark.

MR. CORNING: I think this cost mark a very good thing. Now in California they get about 2 or 3 times as much as we do. I remember filling a prescription for a party, for which I charged 75 cents, and this party afterwards told me that he had paid \$1.50 for the same prescription in California. This is only an instance. If we could establish an universal cost mark, we would get more for our goods, and it would save the other fellow's reputation as well as our own. The principle is a very good one, and no one objects to it, and I do not see why we cannot establish it in every State.

MR. DOHME: I approve of this cost mark, but it must be one that is easy to remember, otherwise it will be a failure.

DR. DOHME: I think it would be a good idea to use Roman or Greek letters. These I do not think would conflict. To make it more successful, I would suggest to adopt some mark of distinction, so that when this mark of distinction is seen on a label, every druggist will know it is the universal cost mark.

MR. BECK: I think that capital letters would make it distinctive.

MR. HYNSON: That would not do at all, as the wholesalers and retailers and their clerks use capital letters indiscriminately, and they would conflict. I think it would be best to let this matter be brought up at our next meeting, and the delegates to the American Pharmaceutical Association and the N. A. R. D., be instructed to recommend some mark of distinction.

DR. DOHME: How would it do to let the letters remain as they are, but to put a frame around them, as a mark of distinction. I suggest a maltese cross frame around the present universal trade mark to distinguish it from other private marks.

MR. CORNING: I think it would be better to direct that it be taken up at the next meeting of the National Association of Retailers.

DR. DOHME: I move that the delegates to the N. A. R. D. be instructed to recommend some universal cost mark.

MR. BECK: I think that a cheap rubber stamp could be used to stamp the cross on the copy of the prescription.

MR. CORNING: My idea is that it would be better to leave it to the discretion of the delegates of the N. A. R. D., and I second Dr. Dohme's motion.

Motion passed.

PRESIDENT: Is there any more matters to come up under unfinished business?

DR. DOHME: At the Semi-Annna Meeting held at Frederick, President McKinney appointed a committee to report upon our Patent and Trade Mark Laws. This Committee would like this Association to adopt the following:

Resolved, That this Association go on record as opposing the granting of patents by the United States Government on products although

fully favoring the patents on processes. Thus Phenacetine would not be patentable, but the process of manufacture would be.

Passed.

MR. SCHULZE: The next important matter to be taken up as unfinished business, is the place and time of our next Semi-Annual Meeting. It ought to be held either in October or November. We should not wait until the Legislature meets; I suggest that it meet in Baltimore.

MR. DE REEVES: I think it ought to be held in one of the country towns, and I hope the President will designate Cambridge as the best place.

MR. SCHULZE: We are on the Eastern Shore now, and our next Annual Meeting may be on the Eastern Shore also; so I think Baltimore is the best place. It means 3 days lost for the Western Maryland people to go to Cambridge.

MR. BECK: I think Baltimore is the best place.

MR. HYNSON: We certainly appreciate the invitation of Mr. De Reeves, to meet at Cambridge, but I think it best that we meet in Baltimore.

PRESIDENT: According to the By-Laws, the President will after due consideration, select a place of meeting.

The following delegates to the American Pharmaceutical Association, at Put-in Bay, were then appointed: Mess. J. Webb Foster, A. Eugene De Reeves, Wm. C. Powell, John G. Beck and Arthur A. Quandt.

PRESIDENT: Mr. Ware will now read a paper in reply to the following article on "Substitution," which appeared in the *Philadelphia Medical Journal*:

**TWO CASES OF HOMATROPIN INTOXICATION OR
SUBSTITUTION, WHICH?**

BY —

To the Editor of The Philadelphia Medical Journal,

In your issue of February 23, you report the proceedings of the Buffalo Academy of Medicine and a resume of a paper "The present status of pharmacy and its possible improvement," by Dr. Long. In it, most cogent and important reasons are given for higher professional attainment and standards to do away with that most dangerous spirit, commercialism, and its attendant evils—counter-prescribing and substitution. In it the writer "believes the medical profession should encourage the professional and discourage the purely commercial in pharmacy, and by their aid every city should have a few first-class prescription pharmacies with the objectionable commercial features eliminated. That medicine and pharmacy should not be too widely separated, as medicine needs the help of pharmacy, so the latter should be able to look to medicine for her ideals and standards."

Let us join hands and enforce these ideal conditions. It is within our power and can be accomplished by boycotting every pharmacist whom we know to be guilty of such practices, and patronizing only those pharmacists who work in the interest of all concerned—the doctor, his patient, the public, and the pharmacist. A few of such ideal pharmacists can be found in all cities and towns. By adopting such measures such dangerous practices as are portrayed in the following cases, will be avoided :

February 21 last, a young woman, 30 years old, came to my office at noon to be refracted, having, for an hour previously, instilled two drops of a homatropin hydrobromate solution (gr. ss to $\frac{1}{2}$ dr.) ordered a few days before, in each eye every 10 minutes for 6 times before coming. Upon her arrival her pupils were widely dilated and marked symptoms of intoxication present, as dryness of throat (so much so that she called for water every half minute or so during my attempt at examination), redness of skin, incoordination of movement, inability to walk to her carriage, on dismissal. I assisted her to her carriage, after a very unsatisfactory examination due to incoherence produced by the drug, and she went home and became delirious and remained so for nine hours, calling in, until my arrival, her family physician some six hours after she left my office. I found her pulse 150, marked redness of face, speech incoherent and quite delirious and prostrated. Her family physician had in the meantime sent to the druggist for a copy of my prescription, which was given him and read thus:

Miss—,

Take of Homatropin hydrobrom. gr. ss
Aquæ dest. $\frac{1}{2}$ dr.

M. Sig.—Two drops in each eye every 10 minutes for 6 times before coming.

The alarm of the relatives was quieted by assurance that all would be well in a short time, and that the young lady was poisoned, but not seriously, by the use of the drug, and that it was due to idiosyncrasy (an extreme susceptibility of the girl to its effects), or that some other drug had been substituted for the one ordered, and that if her dilated pupils and inability to read did not pass away after 48 hours, I could surely say that she had been given the wrong drug by her pharmacist, since such alarming symptoms were extremely unusual from the use of homatropin. I left the house, asking her relatives to bring her to my office 48 hours after, and if her pupils were still dilated I would then think it was substitution and not idiosyncrasy. She did so, and her pupils were still dilated and accommodation suspended. I dismissed her and asked her to again return 48 hours later. She came again with her eyes in the same condition as on her previous visit. Now I assured her it was not homatropin, and went to her druggist (one of our so-called "reliables") and he showed me a 1 gr. bottle of — homatropin hydrobromate, with half of it gone, his statement being "this is the balance after filling your prescription. I had none in when your prescription came in and I sent to So and-so," (mentioning a reliable firm). But on inquiry the said firm assured me that he had not purchased anything of the kind from them. Did he forearm himself after the alarm was given? Now what redress have we, myself and the patient? None but to boycott him eternally, which I shall certainly do,

Again, February 23 last, a young lady, 23 years old, was given a prescription similar in every particular to the one in the last case. February 24 she came to me in quite a similar, but not so markedly intoxicated condition as in the previous case. She had all the phenomena noted from mydriatic intoxication, including the above conditions, for 24 hours. She returned 48 hours after for final examination and prescription for glasses after the effect of the mydriatic had disappeared. as is usually the case, 48 hours after the use of homatropin. She was still under its influence (ocularly), and on the sixth day after still manifested paralysis of accommodation with mydriasis.

Now, Mr. Editor, can we not do something to protect ourselves and our patients from such gross malevolent misconduct on the part of our so-called "good pharmacists." I think so. Let us be exclusive and patronize only the worthiest, those so ably depicted by Dr. Long in his able essay.

I trust you will give this a place in your columns, so that others may be warned of ever-present dangers.

REPLY TO THE ABOVE.

BY CHAS. H. WARE.

During the past Winter a physician of Baltimore prescribed for a patient the following:

Take of Homat. Hydrobromate gr. $\frac{1}{2}$
Aq. Destil..... dr. $\frac{1}{2}$

M. Two drops in each eye every 10 minutes for 6 times before coming.

This prescription was filled by one of our Baltimore Druggists, who stated that the prescription was not used for five weeks after it had left his store; then the patient must have instilled into her eyes 24 drops of the solution before driving down to the doctor's office. She returned home very sick, showing toxic symptoms of some strong mydriatic. A few days after, the physician called on the druggist, and asked him if he had any Homat. Hydrobromate in stock, and he showed him an unopened bottle of -- containing 1 grain. He also told the doctor that the $\frac{1}{2}$ grain dispensed in his prescription was obtained from a well known and reliable drug firm. The druggist afterwards produced the drug envelope of the firm. You can imagine the astonishment of this druggist to read the physician's article on substitution; insinuating that he had forearmed himself, in case the physician called to see him.

This affair was commented on at one of our College of Pharmacy meetings, and one of the druggists said he had tested the few drops left in the bottle, and strange to say it showed the same color test of an open bottle of Homatropin Hydrobromate he had in stock. A few days after this meeting, I filled the following:

Take of Homat. Hydrobromate..... gr. $\frac{1}{2}$
Aqua Distil..... dr. $\frac{1}{2}$

M. Sig. One drop in each eye every 10 minutes for 6 times before coming.

This prescription was written by the same doctor and was not similar in every particular to the other prescription. 12 drops were used instead of 24 drops. Not having this rare alkaloid, I obtained 1 gr. from Mr. C. L. Meyers. It was taken out of a 5 gr. bottle, which had never been opened since it had been sealed by the manufacturer. I used $\frac{1}{2}$ gr. of it and when I heard of the toxic effects produced on the patient, I took the other $\frac{1}{2}$ grain to the physician who stated since, that he had

used it on another patient, producing a mydriatic effect, lasting 6 days; but no toxic effect.

I then asked him for the balance of the solution so that I could protect myself by having it examined by some alkaloidal expert; unfortunately he had either thrown it away or taken it elsewhere to be examined. Fortunately I succeeded in having Mr. Meyer, seal up what he had left, in the original 5 grain bottle, and sending it by mail to Dr. A. R. L. Dohme, whose report upon it, and also upon a 1 grain unbroken package of the same salt, which I subsequently purchased from Mess. Muth Bros. & Co., I herewith append:

"Received on June 23rd, a 5 grain bottle of — Homatropin Hydrobromate which was sealed with paraffine, and from which some had been taken. Its contents consisted of small crystals whose melting point was found to be 166% C., and which gave a distinct and lasting purple color when some of it had been treated with fuming nitric acid and evaporated to dryness on a porcelain dish on a water bath and was touched with a drop of a solution of alcoholic potash. This showed the presence of atropine for homatropin when thus treated gives no such color, but a yellow-brown. The 1 grain bottle handed me by Mr. Ware was an unbroken package of — Homatropin Hydrobromate. Its crystals melted at 210% C. and did not give a purple color when submitted to the above reaction, which is to be found on page 255, Guareschi's *Einführung in das Studium der Alkaloide*, translated from Italian into German by Kunz-Krause. This indicates, in fact, proves practically that the 1 grain bottle was pure Homatropin Hydrobromate, and that the 5 grain bottle contained a mixture of this salt and some salt of atropin."

This examination of Dr. Dohme's shows that the salt I obtained from Mr. Meyer contained atropin and that hence, the doctor might readily obtain the results of atropin from the prescription filled with the same. From what has been said it is natural and correct to conclude that the (physician) and the manufacturer were both at fault, and not I, the pharmacist; the physician, as I have sufficient evidence to prove, because he instilled too much of the drug into the patient's eye, whether it was atropin or homatropin, in a giving space of time. In one hour his patient received about 1-5 grain, and according to Merck's Index, his letter to me, and the statement of other physicians, this amount was double the maximum daily dose. The manufacturer was at fault because the bottle of Homatropin Hydrobromate that I received from Mr. C. L. Meyer, plainly so labeled, contained atropine in some form. Wherever the burden of the blame may rest, it certainly did not rest upon my shoulders, for I obtained a bottle of Homatropin Hydrobromate, and dispensed it correctly as prescribed by the physician. I hence think

that this Association representing the pharmacists of the State at large who have been attacked in this article should either request the physician to retract his statement, or should publish an article without mentioning names in reply, in order to protect its reputation with the medical profession.

LETTER FROM MR. C. L. MEYER.

BALTIMORE, July 10, 1899.

Maryland Pharmaceutical Association,

GENTLEMEN: Being in doubt whether I will be able to attend the session, when the discussion will take place regarding Homatropin Hydrobromate, I write you a full account of my connection with the case in question.

On November 5, 1898, I bought from Muth Bros. & Co., two 5 grain bottles — Homatropin Hydrobromate, which accompanying bill will verify. One bottle was numbered No. 9278, the other, which is in Mr. Ware's prosession, I do not remember, but for convenience sake will call No. 1.

Bottle No. 1 had never been opened until Mr. Ware sent to me for 1 grain, which was carefully weighed out and labelled. This occurred several months since. In the interim between then and July 3, I used another grain, but have not heard of any had effects resulting therefrom. On July 3, Mr. Ware obtained the remaining 3 grains in bottle No. 1 from me.

Bottle No. 9278, I sold to Dr. Edw. J. Bernstein, who has informed me that he has had very unsatisfactory results from the use of same. He prepared a 1% solution and has used it in 99 cases of which he has the record. In over 60 of these cases bad results followed its use, namely: nausea, dizziness and prolonged dilation of pupils. In six (6) cases he has had *extremely bad* results the pupils remaining dilated from 4 to 5 days in spite of the use of Eserine.

Dr. Bernstein stated that formerly he used to instill one (1) drop in each eye every 10 minutes for an hour, but lately has obtained full dilation from 2 to 3 drops in all, at intervals of 15 minutes, but even this produced nausea in the majority of cases.

The six cases especially mentioned were all dark complexioned, *none* having light hair nor blue eyes.

Owing to the unpleasant results from its use, Dr. Bernstein reported same at the medical meeting, recently held in Columbus, Ohio. It was there found that other oculists had the same trouble, especially Dr. Wescott, of Chicago, who has had very bad results.

Upon further inquiry as to whose make of Homatropin had been used, I was informed that —— had been used in each instance. Dr. Bernstein still has in his possession several grains from bottle No. 9278, which can be obtained for further investigation.

Respectfully,

CHAS. L. MEYER.

Dr. Bernstein also states that solution of Atropia Sulph. (—) burns the eyes, which it did not formerly do.

MERCK'S LETTER.

NEW YORK, June 27, 1899.

Chas. H. Ware, Baltimore, Md.,

DEAR SIR:

We duly received your favor of the 24th inst. * * * * * To the best of our knowledge, the substance under consideration does not deteriorate if the usual precautions as to keeping are observed. A solution of Homatropin Hydrobromate will doubtless deteriorate. We have no further information on the article than that appearing in Merck's 1896 Index.

In connection with your communication, we would call your attention to certain facts. Homatropin Hydrobromate is not official in the United States Pharmacopœia. It is officially recognized, however, by the German Pharmacopœia. This authority gives the maximum single dose of the substance as .001 Gm. and the maximum daily dosage as .003 Gm. Now, if one drop of your prescription were instilled into the eye every ten minutes for one hour, you would thereby introduce .0051 Gm. of the salt. As you know, this is almost double the maximum *daily* dose, and might in some cases be sufficient to induce systemic effect. We would say further, that unless the instillation was made with a practiced hand, more than a single drop at a time might easily enter the eye. Certainly this is a point to be considered with so powerful a drug as Homatropin.

In Merck's Index a 1% solution is advised for applications to the eye. Prof. Hare, in "Practical Therapeutics" advises 4 grains of Homatropin Hydrobromate to 1 oz. distilled water. The prescription cited by you represents a solution of 1.732%.

Naturally we are interested in the case you have brought to our notice, and will be pleased to hear from you further; especially since it is your intention to have the Homatropin analyzed with the view of preparing a paper for your State Pharmaceutical Association.

Assuring you of our regard, we remain,

Faithfully yours,

MERCK & CO.

PROF. CASPARI: I move that this Association request the physician to publicly retract his statements, and acknowledge that he acted hastily, in jumping at the conclusion that the druggists deliberately substituted. I understand that marked copies of this medical journal have been sent out broadcast.

MR. DE REEVES: I had quite an experience in Philadelphia, with adulterated Homatropin Hydrobromate. A specialist got me to buy an original bottle of it for his own use; after using it on one of his patients, it produced extreme prostration and collapse. Much to my astonishment the doctor blamed me for it, as if I had *made* the drug. I investigated the subject and found that the bottle I had purchased, contained a cheap, adulterated product. I found also, after having trouble with another bottle, that two kinds of labels were used, one for the best grade and the other for a cheaper one.

PROF. CASPARI: We all remember about that affair of labels, but I think it best not to again agitate that subject.

DR. DOHME: I hardly agree with Prof. Caspary; it is a very serious subject and I am sorry Mr. Alpers is not here, as he probably would take issue with me, which would bring to light some interesting facts. In a talk with him on the subject, I stated that my tests were incontrovertible, especially the melting point, and the Vitali's test, which Mr. Alpers took exception to, I thought. This test is accepted the world over. Some time ago the U. S. Government had trouble with Atropin Sulph. Tablets and we were informed our tablets had been rejected, because they did not contain Atropin. I went down to Washington and had an interview with the head chemist of the department and secured some of our tablets. I showed him by Vitali's test that Atropin was present and he acknowledged they had used the wrong solution. The sugar was dissolved by his Etherial Solution, but by using Chloroform the color test was plainly brought out. He then said Vitali's test was absolute. Now the bottle of Homatropin Hydrobromate I tested for Mr. Ware showed by the purple color of Vitali's test, that Atropin was present. Mr. Alpers has intimated that possibly the Homatropin changed to Atropin, after it had been put in the

bottle and sealed up by the maker. This could not happen. It is an entirely different chemical and could no more change to Atropin than Brom. Potass. could change to Brom. Sodium.

MR. HYNSON: No doubt the doctor acted hastily and will take pleasure in acknowledging that he was mistaken; at the same time he was right when he said some other drug had been substituted.

PROF. CASPARI: But what right had the physician to speak of this druggist as one of the "so-called reliables." It was not in his province to decide or say that the druggists are unreliable.

MR. SCHULZE: He should be requested to retract his statements, especially, "that only a few druggists will not substitute."

MR. CORNING: I think every specialist who has read the article, must have seen that the author of it did not prove what he claimed. Instead of investigating the subject in a calm, judicious and scientific manner, he merely wrote a sensational article, to throw discredit on the druggists as a class. He has made a mistake and the only manly way is, for him to come out publicly and say he was in error, for his article certainly throws great discredit on the whole drug trade. As a scientist he had no right to draw such conclusions.

MR. HAMILTON: I know the doctor well, and you must certainly take into account what he must have suffered in the eyes of his patients, and I know he will be glad to modify his language.

MR. HYNSON: But are we not responsible for the purity of our drugs? I move that we amend the motion of Prof. Caspari, so that this whole matter be referred to the Committee to Confer with Medical Societies, and let it place these facts before the physician.

MR. DOHME: I certainly think the best way will be to get a retraction from him by this Committee.

MR. HYNSON: Allow me to say that I take the responsibility of saying that the doctor does not believe Mr. Ware deliberately substituted.

MR. WARE: I do not believe he does either.

PRESIDENT: As amended, the motion before this house is as follows:

Resolved, That the Association requests the Committee to Confer with Medical Societies, to ask Dr. — to retract the statements published in the *Philadelphia Medical Journal*, of April 1st, as it has been proven to our satisfaction that the blame should fall on the manufacturer.

Passed.

PRESIDENT: We will now listen to report of the Committee on Time and Place for the Next Annual Meeting, Mr. Hynson is Chairman.

MR. HYNSON: Your Committee suggests:

That when we adjourn, we do so, to meet at the "New Chesapeake House," Betterton, and that the Secretary be instructed to write the Delaware Pharmaceutical Association to assemble so as to meet us in joint Session, at such a time as can be agreed upon by the two Associations.

HENRY P. HYNSON.

DAVID M. R. CULBRETH, M. D.

WM. C. POWELL.

PRESIDENT: What is your pleasure in regard to this report.

MR. FOSTER: I move that Hagerstown be substituted for Betterton.

DR. DOHME: Before accepting the report, I would like to know more about the accommodations at Betterton.

MR. DOHME: We had a meeting at Hagerstown a number of years ago. It is a large and thriving place, and we had a very

pleasant time, and the druggists of that section attended the meetings and did all in their power to make them a success.

MR. HYNSON: I cannot understand why Hagerstown would be better than Betterton.

MR. FOSTER: The largest attendance was at Hagerstown, and I make the motion again that we meet at Hagerstown, sometime in June, 1900.

Passed.

PRESIDENT: We will now take up Query No. 13:

Querry No. 13.—“Is the rebate system a success, when any and every cutter can get as many rebate goods as he needs and more? Why should the proprietor be compelled to forego selling the cutter when the latter gets the goods anyway and some false friend of the rebate system who in public favors it and behind his counter stabs it in the back, supplies him by shaving a few of his per cent of profit? An investigation to point out the Judases of the rebate system would be invaluable for the whole drug trade, for with them out of the way, the cutter is helpless.”

IS THE THE REBATE SYSTEM A SUCCESS,

BY A. J. CORNING.

This subject has so often been discussed in its different phases that anything I may have to say must of necessity be somewhat trite. However since the task has been assigned to me, I will do the best I can, in the hope that I may be able to present the subject as it appears to me, and thus make it serve to suggest further thought to others. To keep it alive until finally a favorable solution can be reached, is about all I can expect to do. The whole subject simply resolves itself into a question of commercial honesty.

If the cutter buys rebate goods, it must be presumed that he binds himself to the conditions and if he sells them at a price less than that stipulated in the contract, he simply violates his good word. If at the time of the transaction, there is a tacit or any other understanding between the buyer and seller, that the buyer will ignore the contract, then the seller becomes a party to the fraud. A man is certainly amenable to a law or contract which he has helped to make. A lapse is more reprehensible from the fact that he is simply a voluntary and not a compulsory member of the compact. Common sense would dictate his course.

There are undoubtedly many cases, where the cutter buys indirectly, without conditions, this does not confuse the situation, we simply have to look to the original buyers, upon whom the moral responsibility rests.

That the rebate system has been instituted and its existence is a fact—implies conditions of mutual agreement—These conditions may be of a legal nature with penalties attached, or simply those of honor—nevertheless they are binding—if there is honor among gamblers, certainly respectable men should look to their laurels.

The mere fact of an organized rebate system presupposes obligations on the part of those composing it and the further obligation to see that the conditions are properly observed. This a fundamental principle of law. If this is not true, why go to the trouble to organize. If this obligation is accepted and not acted upon, what is the use of the organization.

The results would seem to indicate that a body of seemingly reputable men had leagued themselves together for the purpose of doing foolish and questionable things—for the cutter gets the goods—sells them under the price. When and how does he get them? Was the rebate plan gotten up for that purpose? It is certainly a cumbersome way to prevent him from getting goods.

It is not enough to say that every man is the keeper of his own conscience, and after the goods have been sold and the money received, the seller has no further interest. Legally that may be true, but what is the object of the rebate plan if not to stop cutting, and if not to stop cutting, why the plan? Is it simply a masquerade gotten up as a foolish parade by men, who are supposed to have outgrown boyish things; or a foolish attempt to throw dust in the eyes of sensible men.

To point out the Judases, it is only necessary to reflect, that we have not to go far in search of them—look for the two parties to the contract, it must be one or the other, and perhaps both. But what can be done? there is no legal redress, and apparently none in honor. It is simply a question of integrity. A man's word should be as good as his bond, and the whole solution of the trouble is to spot the Judases. Ventilate the commercial irregularities and render them odious. It is after all a matter of honest dealing.

DR. DOHME: I move that this paper be accepted and published in our Annual Proceeding.

Passed.

PRESIDENT: We will now listen to a paper in reply to Query 15, by Mr. Powell:

Query No. 15.—“Is not the artificial Benzoic Acid as efficient and as pure as that sublimed from the natural gum? Chemically it is identical and if equally pure, why should it not supersede the more expensive natural article?”

ARTIFICIAL BENZOIC ACID.

BY WM. C. POWELL.

Benzoic Acid (C₆ H₅. COOH.)

The U. S. P. of 1890 characterizes Benzoic Acid as “an organic acid, usually obtained from benzoin by sublimation, or prepared artificially, chiefly from toluol.” That obtained from the urine of herbivorous animals is used chiefly in technical operations.

Although Lemery (1675) characterized the product of the dry distillation of benzoic as an acid, we find that “The Edinburgh New Dispensatory” (1786) recognizes it under the official title “Flowers of Benzoin,” and describes it as “a white saline concrete, of an acidulous taste and grateful odor, soluble in rectified spirit, and, by the assistance of heat, in water.”

The composition of Benzoic Acid was determined by Liebig and Woehler in 1832.

One preparation (Camphorated Tincture of Opium, containing 4 grammes of Benzoic Acid in 1000 Cc of finished tincture) and the salts of Ammonium, Lithium and Sodium Benzoate are official in the U. S. P. The purity of the acid and its salts depends upon the absence of carbonizable matter, chlorine and cinnamic acid. The ex-gum acid may contain organic matters, and as cinnamic acid varies in considerable quantities in benzoin, it is reasonable to expect its presence in the product obtained by sublimation.

A large proportion of the so-called “benzoic acid from toluene” is obtained as a by-product in the technical preparation of benzaldehyde, and as this depends upon the removal of a chlorine atom by one of carboxyl it is also reasonable to expect the presence of chlorinated compounds in the finished product.



Although the ex-gum acid and the ex-toluene acid are chemically the same, we find that some clinicians reject the latter for the former, while the manufacturers, for economical reasons, prefer the latter.

Samples of both acids have been examined and the results are tabulated below:

No.	Physical Appearance.	Odor.	Carbonizable Matters.	Presence of Chlorine.	Cinnamic Acid.	Solubilities.		
						Water at 15° C	Alcohol at 15° C	Melting Point.
1	Pure white feathery crystals, or scales.	Benzoin-like.	None.	None.	None.	Abo't U.S.P. req'r'me'ts.	2 parts.	250° F
2	Pure white laminæ of silky lustre.	Balsamic unpyreumatic.	None.	None.	None.	"	"	251° F
3	Pure white crystals, or scales.	Benzoin-like.	None.	None.	None.	"	"	250° F
4	Pure white laminæ of silky lustre.	Eyreumatic Almond-like.	Trace	Trace	Slight Almond	"	"	246° F
5	Pure white scales.	Benzoin-like.	None.	None.	None.	"	"	250

No. 1. Sublimed from benzoin.
 No. 2. Prepared from toluene.
 No. 3. Sublimed from benzoin.
 No. 4. Prepared from toluene.
 No. 5. Origin unknown.

In summing up the results of this investigation it has been thought best to compare them with those requirements enumerated in the U. S. P.

The solubilities and melting points compare closely with those of the Pharmacopœia (excepting No. 4, which will be discussed later), but it will be noticed that terms different from those of the U. S. P. have been used to describe the physical appearance and odor of the ex-toluene acid.

The compact layer, or laminæ, of the ex-toluene is characteristic, as the acid from the gum, so far as observed, is never found in this state.

No. 4 is a very impure product, although it comes from a reputable manufacturer. Chlorinated compounds were found in considerable quantities, and, no doubt, had either of the official salts been prepared from this acid the presence of *Cloride* would have been indicated when tested by the addition of a few drops of silver nitrate solution.

The melting point is remarkable, for after repeated trials it was found to remain at 246° F.

After the completion of this work, as indicated in the table, another sample of ex-toluene acid was obtained and examined. The results showed it to be free from all impurities.

Askinson (*Perfumes and their Preparations*) says, "Synthetic benzoic acid is worthless to the perfumer; in his art he can use only a benzoic acid made from gum benzoin by sublimation, because it contains a very aromatic essential oil for which the acid is merely the vehicle and which can also be employed alone." He advises the manufacturer of perfumery to make his own benzoic acid by the process of sublimation.

Kebler says, "I have met with only one sample of lithium benzoate made with the ex-gum acid."

As this investigation shows only one sample out of six of ex-toluene acid to be impure it is reasonable to suppose that soon, in all but a few special operations, it will supersede the more expensive article.

Accepted with applause.

DR. DOHME, (Producing a large box): Mr. President, (if it is in order), I wish to make a presentation speech. A committee of ladies, representing the fair sex of the Eastern Shore of Maryland, have deputized me to present this to Mr. Hynson, as a token of their appreciation and kind remembrance.

With the help of Mr. Powell, Mr. Hynson opened the box, which contained a miniature automobile, worked by a spring.

MR. HYNSON, (Holding it up, amid much laughter and applause): I will not take up the time of this meeting with a long speech of thanks, yet I feel as though I would like to, but we had so much fun and nonsense last night, that it is time to call a halt. I really believe this has been given me, because I have tried to do all in my power to make these meetings thoroughly enjoyed by all present, and I accept it in that spirit. (Applause.)

MR. WARE: Mr. Hynson should be congratulated upon having made the most felicitous speech he has even made in his life.

Applause.

PRESIDENT: We will now listen to a paper by Mr. Aug. Schrader, in reply to Query 20:

Query No. 20.—“Lily of the Valley flowers and root are both prescribed—which is the more active part of the plant, and is not a standard strength desirable for such an active medicinal agent?”

LILY OF THE VALLEY.

BY AUG. SCHRADER.

(*Convallaria Majalis*.)

Synonym: May-lily.

Part Employed: The rhizome; leaves and flowers.

Natural Order: Liliacæ.

Habitat: Europe and United States.

Properties: Diuretic; Heart Stimulant; and Tonic.

Active Principals. Convallamarin and Convallarin two glucosides.

MR. PRESIDENT AND GENTLEMEN:

When first I received and was requested to work out this query, I felt a little loath to take it up. However, after considering the matter, I thought it no more than my duty to the Association to do the best I could.

Taking the task in hand, I found it a long and very tedious one; requiring a great deal of attention and time, but very instructive and of great benefit. So after reading considerably upon the subject for sometime, I found only one method which I could conveniently use on a small scale, and that one was Tarret's. It is my intention here to state my observations so far as my humble knowledge permitted me to make them in the very short time which I had at my disposal; which for the rhizome is as follows:

I took 50 grms. of *Convallaria* rhizome and powdered it into a moderately fine powder; placed it in a 500 Cc flask and filled the flask with alcohol 95% and macerated for three days. I then collected 500 Cc of tincture to which I added Sol. Subacetate of Lead, obtaining heavy precipitate, requiring for complete precipitation 27½ Cc. I found it as always best to let it stand for a short time after having added lead solution. Then I filtered and removed excess of lead with Dil. Sulphuric Acid 10%, requiring about 5Cc, it being necessary to use

enough; after which I filtered and neutralized with ammonia water; taking 200 Cc of the liquid and evaporate off the alcohol on water bath, obtaining a light brown residue of the consistency of an extract which weighed 31 grs. This residue I undertook to dissolve in warm distilled water; a small portion of the residue being insoluble. I then filtered, and the filtrate I treated with sol. tannin 10%, keeping neutral with sol. carbonate of soda, obtaining a very fair quantity of precipitate, which I collected on filter and washed well with distilled water; finally dissolving it in alcohol 60% filtered through animal charcoal to free from coloring matter, decomposed filtrate with oxide of zinc, filtered and evaporated to dryness, re-dissolving in 90% alcohol filtered and evaporated, and obtained $\frac{3}{4}$ gr., the 200 Cc being equal to 20 grms. of drug which would make the % of Convallaria Rhizome contain about 0.24% of the active principals.

The substance had a very bitter taste; a light brownish color; also quickly taking up atmospheric moisture to the extent of becoming gummy.

The assay of the flowers and stems I carried out in the same manner as in the case of the rhizome, and received as first residue a dark green, thick, oily liquid, weighing 38 grs. with which heat had no effect at boiling temperature. In taking it up with distilled water, I had a great deal of trouble in filtering, the oily substance clogging the pores of the filter. But finally washing it well and filtering and adding sol. tannin, I got only a slight precipitate, which showed the flowers and stems to be weak in glucosides. So in this case, by Tarret's method, I obtained in the case of flowers and stems only $\frac{1}{4}$ of a grain from 200 Cc of liquid.

This might have been due to time of collection; but both specimens were of the best quality, having been obtained from one of the most reliable wholesale drug houses.

As regards the latter part of the query, I would say that, it is very important, indeed, that a supposed valuable drug of this kind should be standardized; especially so, if it is to be used for that most dreadful and dangerous disease, namely, heart failure; for which it is claimed to be far superior to digitalis, because of its non-accumulative effect which is said to be one of the dangerous properties of digitalis.

The advantage of convallaria is said to be in its immediate action upon the heart with good results, in the proper dose; and this condition of a "proper dose" can only be had by knowing the exact amount of convallamarin contained therein.

Therefore, the only hope there is for a reliable preparation of Lily of the Valley is one that is officially standardized. Then the physician knows well what to do, and the poor druggist would not be apt to get the blame if the results were bad.

I hope the time is not far off when some person more able and capable to handle this subject than myself, will clear up all obstacles and misunderstandings concerning this most valuable drug, and demonstrate that it is one of our most valuable remedies.

DR. DOHME: I move that this paper be accepted; it is a valuable contribution.

MR. HYNSON: I second the motion. It is hard to find a retail druggist who will take the time and trouble to write a paper of this kind, and I think our Association stands ahead of other associations in this respect.

Passed.

DR. DOHME: I have a paper on Query No. 14:

Query No. 14.—“Are English narcotic herbs superior to German or Hungarian—actual assays of belladonna, henbane, digitalis leaves of both sources bought in the open market are necessary to establish this and either justify or ridicule the extortionate prices charged for the English Leaves.”

ASSAYS OF BELLADONNA, HENEANE AND DIGITALIS LEAVES.

BY A. R. L. DOHME, PH. D. AND H. ENGELHARDT, PH. D.

Belladonna, Henbane and Digitalis Leaves are among the most generally used drugs of the Pharmacopœia, and as our energetic cousins across the water for many years have undertaken to and succeeded in cultivating all three and charged us cousins of the States fair prices ranging from \$1.00 to \$3.00 per pound for the same, it seemed not out of place to determine by the burette if their narcotic tax was justified. It is a well known fact to all of you no doubt that beautiful mature narcotic herbs are grown in and are indigenous to Germany and especially Hungary, and that our cousins German and Tzigane friends only ask us about fifteen cents a pound for their herbs. As far as we know no work on this subject has as yet been done and many of us Yankee pharmacists still, be it from habit or lack of better knowledge, draw our supplies of narcotic herbs from John Bull. As was expected the results show that John Bull has been “doing” us in a measure at least, for although the English narcotics exceed the Hungarian and German somewhat in alkaloidal content, the excess is in no way com-

mensurate with the difference in price. The English leaves are selected and are practically free from stems, in fact whole leaves do not appear in the English merchantable article, only broken leaves deprived of stems and ribs as well. They are put up in bottles holding a pound each, and when you get them, you do, to be sure, get all leaf. As I have however shown in case of Stramonium Leaves that the stems are richer in alkaloids than the leaf, it need not be assumed that the absence of stems in the English herbs necessarily improves the alkaloidal content of the same. We purchased the English leaves in the open market of one of our leading wholesale druggists, and our Hungarian Belladonna and Henbane as well as our German Digitalis from a leading New York importer. The method of assay adopted was that of Keller, which we found however required alteration in several particulars to make it practicable for these drugs. Keiler says in his method: 25 gms. of powdered drug are shaken with a mixture consisting of 100 gms. of ether, 25 gms. of chloroform, 10 gms. of aqua ammonia (sp. gr. 0.96) and 50 c. c. of water, and allowed to macerate for several hours. Then 100 gms. of supernatant liquid are poured off. We never could get more than 85 gms. however and supposing that our drug was in too fine a powder (No. 40), substituted a No. 20 powder drug but even in this case we could never get fully 100 gms. of menstrum from the drug. This does not of course vitiate the method or the result, but merely unnecessarily complicates the calculation. The ether-chloroform solution is extracted with a 1% sulphuric acid solution several times and the resulting mixed acid solutions are made alkaline with ammonia, and extracted with a solution containing 3 parts of chloroform to 2 parts of ether. This ether-chloroform solution is distilled from a flask to recover the ether and chloroform and the residue treated with a little ether and heated on a water bath to remove all the ammonia. A little alcohol is added to dissolve all the alkaloids and impurities as well and diluted with distilled water, which causes a slight turbidity. This rather facilitates than hinders the determination of the color change of the indicator used in the subsequent titration. Haemotoxylin was used as indicator and the alkaloidal residue in solution titrated with decinormal acid and alkali. If Keller's method is applied to ground Belladonna or other ground roots it is easy to pour off 100 grams of supernatant liquid which indicates that he possibly did not intend his process as given for ground leaves which always absorb more menstruum than roots. Our results for belladonna and henbane leaves follow and in each case are the mean of five assays;

	English.	Hungarian.
Belladonna Leaf	0.648% total alkaloids.	0.416% total alkaloids.
Henbane Leaf	0.557% total alkaloids.	0.508% total alkaloids.

The unusually high amount of alkaloids obtained in case of henbane we cannot explain, and it only shows how important it is for the U. S. P. to establish an alkaloid standard for these narcotic herbs, for although the average amount of total alkaloids contained in twenty samples of the same we have assayed at different times during the past few years is not in excess of 0.25% and usually is less, here we have both Hungarian and English leaves that contain more than double that amount, in fact more than the average Belladonna leaves contain.

There can be no error, since these assays were made in quintuplicate and at different times. As far as our problem is concerned, they show an excess of about 50% in favor of the English Leaves in case of belladonna and of barley 10% in favor of the same in case of henbane leaves. For these two leaves the figures prove conclusively that the English article is not worth what it costs by any means, and that for all the requirements of therapeutics the Hungarian leaves are amply rich in alkaloids. In case of Digitalis the process of Keller was also adopted and the amount of digitoxin determined as indicated by him. This method differs however from that above described for belladonna and henbane and we will give it in full. Keller uses a special percolator consisting of a glass tube 3 centimeters in diameter and 16 cm. long, which is narrowed at the bottom to a tube 10 cm. long and 8 mm. in diameter and ground off diagonally at the end. He closes the bottom of the wider part of the apparatus with cottonwool and puts upon the same 20 gms. of No 5 powder digitalis leaf which has been rubbed with 8 c. c. of dilute alcohol in a mortar. After packing the drug tightly a plug of cottonwool is put on top of the same and the apparatus set in a bottle holding about 400 c. c. and percolated with 300 gms. of dilute alcohol contained in a flask and allowed to stand inverted in the top of the percolator. In about eight hours the percolation is complete; for 4 c. c. of the percolate evaporated, 3 c. c. water added, 2 drops dilute hydrochloric acid and tannin added produce no precipitate or cloudiness. Evaporate the percolate to 25 gms. in a porcelain dish to remove all the alcohol and rinse it completely into a 250 c. c. flask with water until the weight of the entire contents of the flask is 222 gms. Add 25 gms. basic lead acetate, which produces a copious precipitate, which must not be shaken vigorously, but only mildly to facilitate subsequent filtration. Filter off 132 gms. of filtrate and add to it 5 gms. of sodium sulphate dissolved in 7 gms. of water. This precipitates the lead as sulphate. Pour off 130 c. c. of filtrate which represents 10 gms. of digitalis leaves and put into a separating funnel; then add 2 c. c. of Aqua Ammonia (10%) which colors the liquid dark, but must cause no precipitate, thus showing that all the lead has been removed. Shake out the liquid four to five times with portions of 30 c. c. of chloroform,

and filter off the chloroform through a filter saturated with chloroform into a tared flask. Distil off the chloroform and weigh the yellowish varnish-like residue which is digitoxin. To get absolute results this residue should be washed to remove all fats and other slight impurities, when a white residue remains, which is pure digitoxin. The figures we obtained are given below :

Digitalis German No. I, 0.340% Digitoxin as the mean of 4 assays.

Digitalis German No. II, 0.490% " " " "

Digitalis English 0.745% " " " "

As Keller has pointed out in his paper on Digitalis, these leaves vary greatly in digitoxin strength—not only do different year's crops vary greatly from one another, but different sections of the same country vary fully as much, some being very rich in digitoxin and others exceedingly poor in it. Hence in case of this drug a standard active principle strength is extremely desirable, for digitalis is an emergency drug and should be uniform, and above all should certainly always be of average strength. These figures do show the superior digitoxin value of the English leaves, but nothing commensurate with the difference in price. When we consider that Keller examined several samples of German digitalis leaves that contained as much as 0.62% digitoxin, it is safe to conclude that German digitalis is amply rich in digitoxin to justify its general use for making infusions, tinctures or fluid extracts of digitalis. What excess the English leaves have is to some extent due perhaps to their freedom from stems, and to the fact that they are all selected healthy leaves. For this extra 50% of digitoxin it certainly is not just to pay a 1000% advance in price. The answer to the query is hence that English narcotics while richer in active principle than German and Hungarian narcotics are not sufficiently much so to justify the high prices asked for them, and the German and Hungarian are amply rich in active principle to satisfy all therapeutic requirements.

Accepted with Applause.

PRESIDENT: We will now proceed to the installation of officers. I appoint Mess. Powell and Schulze as a committee to conduct them to their seats; before doing so march them round the room and see that they keep step. (Laughter.)

MR. SCHULZE: It gives us great pleasure to introduce our new President, Dr. Alfred R. L. Dohme.

PRESIDENT MCKINNEY, (extending his hand to newly elected President): I am very glad to resign my office in favor of Dr.

Dohme. He certainly deserves the honor you have bestowed upon him.

DR. DOHME: Ladies and Gentlemen of the Maryland Pharmaceutical Association:

Words fail me to adequately express to you my feelings upon this memorable occasion, for when I say I thank you for the honor you have conferred upon me, I can hardly express the feelings that are at this minute uppermost in my heart. That the mantle of authority and responsibility should fall upon so young a member of this Association, while not without precedent, as one of my predecessors, Mr. W. C. Powell, has the honor of being my junior, is unusual, but I can assure you that the problem before us this fall requires vigorous treatment, and youth certainly possesses ample of this quality.

In assuring you of my determination to serve this Association to the best of my ability, and to endeavor to make it the model State Pharmaceutical Association of this country, I feel that I am only continuing to do what I have been striving for these past two years. With such able lieutenants and brigadiers as Hynson, Corning, Schulze, Powell, Caspari, Aughinbaugh, Base, Ware, Foreman, Fouch, Foster, DeReeves, Beck, McKinney, Schrader, Wiesel and all the rest of our valiant cohorts, I feel encouraged to hope that we will succeed this winter in inducing our legislature to pass a pharmacy law.

In the lines of scientific research and trade interests, I feel that we may hope for great things next year, and that the actions and work of the Pharmaceutical Association of the grand old commonwealth of Maryland may be heard to resound with credit and glory in the halls of the highest pharmacy congresses and associations in the land.

Whatever I can do by individual as well as by united effort in behalf of pharmacy in Maryland will most assuredly be done, and I hope I may count on the hearty and united support of all our members during this important and active winter's campaign.

Applause.

MR. POWELL: Our First and Third Vice-Presidents are not with us to-day; so our Second Vice-President will have to speak for all three of them and tell you how much gratified they are to accept. Mr. President, I take great pleasure in introducing Mr. Wiesel.

MR. WIESEL: I thank you very much for the honor and I am sure all of the Vice-Presidents will endeavor to do their best to further the interests of the Association.

PRESIDENT DOHME: Although Secretary Ware resumes his old seat, the Committee will please to escort him round the desk.

MR. SCHULZE: Mr. Ware is so well known, it is hardly necessary to introduce him.

MR. WARE: I have hesitated in again accepting this office a third time, because I find my private affairs are bound to interfere with those of the Association and I cannot always give the necessary attention to them and then again in order to increase the interest in the Association, it seems to me, no officer should be retained more than two years. However, with so many new officers to spur me on, energetic and ambitious, I will try to keep pace with them and do my best to further the highest interests of the Association, and I thank you very much for the honor conferred upon me. (Applause.)

MR. POWELL: Allow me to introduce our new Treasurer, Mr. Fouch. (Applause.)

MR. FOUCH: I was very much surprised when I was asked to accept this honor. I cannot help but feel a delicacy in accepting it immediately after our friend Dr. Culbreth has filled it so well. However, I promised to do all in my power to make our financial condition as healthy and satisfactory as possible. I thank you gentlemen for the confidence reposed in me. (Applause.)

The Executive Committee, Messrs. J. Webb Foster, A. Eugene De Reeves and John G. Beck were then introduced and installed with much applause.

MR. FOSTER: To be elected Chairman of the Executive Committee of the Maryland Pharmaceutical Association is an honor and a trust that I duly and truly appreciate. It is indeed an honor to be elected to a position that has been so well filled by our brilliant Dohme, by our diplomatic indefatigable and astute Hynson, and others of like calibre. The position is no sinecure, entailing as it does, work and responsibility, but I trust, that with the assistance of the balance of the Committee and the rest of our members, I may hope for success to crown my efforts. Never before in our history has conditions been so favorable for the fruition of our hopes in the way of a Pharmacy Law for Maryland. We should make every effort at the coming Legislature to bring such a happy result to pass. As Chairman of the Executive Committee, I shall do all in my power to advance the interest of this Association. (Applause.)

MR. BECK: Mr. President and Gentlemen: I thank you for the honor you have conferred upon me, in placing me on this very important committee, and trust with the aid of my Associates on the Executive Committee to make our next meeting a success, and one long to be remembered, assuring you that I will do my very best to make it a fruitful and enjoyable meeting. I pledge you gentlemen my hearty support. (Applause.)

On motion of Mr. Foster, the Association then adjourned to meet at Hagerstown in 1900.

LIST OF MEMBERS AND FRIENDS PRESENT AT OCEAN CITY.

Wm. C. Alpers,	.	.	.	Bayonne, New Jersey.
Daniel Base,	.	.	.	Baltimore.
John G. Beck,	.	.	.	Baltimore.
J. Emory Bond,	.	.	.	Baltimore.
Chas. Caspari, Jr.,	.	.	.	Baltimore.
Chas. E. Caspari,	.	.	.	Baltimore.
A. J. Corning,	.	.	.	Baltimore.
D. M. R. Culbreth, M. D.,	.	.	.	Baltimore.
Levin D. Collier,	.	.	.	Salisbury.
Chas. E. Dohme,	.	.	.	Baltimore.
A. Eugene De Reeves,	.	.	.	Cambridge.
Alfred R. L. Dohme, Ph. D.,	.	.	.	Baltimore.
Wm. M. Fouch,	.	.	.	Baltimore.
J. Webb Foster,	.	.	.	Baltimore.
Edmund C. Gibbs, M. D.,	.	.	.	Baltimore.
M. T. Goldsborough,	.	.	.	Baltimore.
Peter Hamilton,	.	.	.	Baltimore.
Henry P. Hynson,	.	.	.	Baltimore.
Chas. L. Henry,	.	.	.	Washington D. C.
J. Gilbert Leber,	.	.	.	Pennsylvania.
Robt. S. McKinney,	.	.	.	Taneytown.
Edw. Pennock,	.	.	.	Baltimore.
Wm. C. Powell,	.	.	.	Snow Hill.
Oscar E. Ross,	.	.	.	Baltimore.
R. C. Ringgold,	.	.	.	Baltimore.
August Schrader,	.	.	.	Baltimore.
John B. Schwatka, M. D.,	.	.	.	Baltimore.
Louis Schulze,	.	.	.	Baltimore.
Geo. A. Sohl,	.	.	.	Baltimore.

Otto G. Schumann,	Baltimore.
John M. Wiesel,	Baltimore.
Chas. H. Ware,	Baltimore.

Mrs. Chas. E. Dohme.	Mrs. Alonzo Miles,
Mrs. A. Eugene DeReeves.	Mrs. Edw. Pennock.
Mrs. Chas. L. Henry.	Mrs. Chas. H. Ware.
Mrs. Robt. S. McKinney.	Mrs. John M. Wiesel.
Mrs. C. H. Michael.	Mrs. Otto G. Schumann.

Miss Adele Dohme.	Miss Johnson.
Miss Alma S. Dohme.	Miss Mary L. Ware.
Miss Ida Louise Dohme.	Miss Edith Beck.
Miss Henry.	

Social Features.

Although it has been claimed by our German friends, that Americans are so intent upon making money that they do not possess what is called "a play impulse," the attractive social features at Ocean City this year, were of such a nature, that like boys and girls just out of school, the druggists and their friends, pitched in and had a jolly good time.

Tuesday evening, July 11, was devoted to Progressive Euchre; after an exciting contest the prizes were awarded as follows: 1st Prize—Mr. C. L. Henry, 12 Progressions, Large Decorated Vase. 2nd Prize—Dr. A. R. L. Dohme, \$15 Assortment Merck's Chemicals. 1st Ladies' Prize—Mrs. Alonzo Miles, 11 Progressions, $\frac{1}{2}$ lb. Bottle Extract Snow Violet; 2nd Prize—8 Progressions, Miss Adele Dohme, 5 lb. Can Koko.

On Wednesday, just before the close of the morning session, the Association was agreeably surprised by his Excellency Gov. Lloyd Lowndes, walking into the Casino. He was introduced by Mr. Corning and after an informal reception, listened attentively to the reading of Dr. Dohme's Paper on "The Progress of Pharmacy." As this was the first time our meetings have been honored with the presence of a Governor of Maryland, the Association felt highly complimented and will always have a warm feeling of friendship for Gov. Lowndes. He was much interested in the swimming match, after the morning session, which was won by our next Sheriff, Dr. J. B. Schwatka. Prize—1 lb. Lactated Pepsin, presented by Mess Parke, Davis & Co.

Then followed the Game of Water Polo. Team 1: Dr. J. B. Schwatka, Captain; Wm. M. Fouch, John G. Beck, H. P. Hynson,

Daniel Base, W. C. Powell, J. Webb Foster, Edw. Pennock, Dr. A. Emory Bond.

Team 2: A. R. L. Dohme, Captain; Robt. S. McKinney, C. E. Caspari, Peter Hamilton, C. H. Ware, A. E. De Reeves, J. M. Wiesel, Aug. Schrader, Louis Schulze, C. L. Henry. Mr. A. J. Corning, (in a lady's red dusting cap) Referee. Prize—1 dozen Eskay's Infant Food, presented by The Smith, Kline and French Co. Decided by referee to be a draw, (as a small yellow dog, thinking the sport was for his especial benefit, ran off with the ball, and scored more goals than both sides put together), and the prize to be divided among the married men, provided the referee was given one portion.

In the evening, most of the members and ladies, enjoyed a sail on Sinepuxent Bay.

On Thursday afternoon it poured in torrents and all were glad to get under cover and enjoy the Bowling Match and other games.

Bowling Match—Wholesaler's *vs.* Retailer's.

Although the Wholesaler's were handicapped by only having 12 men to the Retailer's 13, they probably would not have won if the Retailer's had not also been handicapped by two of their best players being out of condition; one having a sore finger and the other having absorbed too much Aloin. The prize was 100 Preffencia Cigars, presented by The Smith, Kline & French Co.

The following is the score:

WHOLESALER'S.

A. R. L. Dohme, Captain,	123
M. T. Goldsborough,	144
Peter Hamilton,	83
Edw. Pennock,	82
Chas. E. Dohme,	105
G. A. Sohl,	81
Chas. Caspari, Jr.,	82
Chas. E. Caspari,	131
Daniel Base,	122
Dr. Gibbs,	106
C. L. Henry,	88
R. Ringgold,	80

RETAILER'S.

J. Webb Foster, Captain,	163
A. Eugene De Reeves,	138
R. S. McKinney,	51
Wm. M. Fouch,	48
W. C. Powell,	52
C. H. Ware,	92
H. P. Hynson,	75
A. J. Corning,	131
L. Schulze,	58
Aug. Schrader,	48
Otto G. Schumann,	95
J. M. Wiesel,	90
J. G. Beck,	72

Total,	1227	Total,	1113
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Won by the Wholesaler's by a score 1227 to 1113.

After this match each members bowled 10 balls, 5 on each alley:

A. R. L. Dohme—1st Prize,	84	Daniel Base,	58
C. H. Ware—2nd Prize,	75	C. E. Caspari,	58
Peter Hamilton—3rd Prize,	73	A. J. Corning,	50
C. E. Dohme,	72	C. L. Henry,	46
Edw. Pennock,	72	J. M. Wiesel,	42
M. T. Goldsborough,	71	H. P. Hynson,	42
J. Webb Foster,	71	O. G. Schumann,	42
R. Ringgold,	70	Chas. Caspari, Jr.,	40
A. E. De Reeves,	68	R. S. McKinney,	30
J. G. Beck,	67	W. M. Fouch,	28
Dr. Gibbs,	65	Aug. Schrader,	27
G. A. Sohl,	64	L. Schulze,	14
W. C. Powell,	60		

Ladies' Bowing Match—10 balls:

Miss Ouida Dohme—1st Prize,	57	Mrs. Henry, . . .	26
Mrs. C. H. Michael—2nd Prize,	42	Miss Adele Dohme, . . .	25
Mrs. Pennock, . . .	37	Mrs. C. E. Dohme, . . .	17
Mrs. De Reeves, . . .	33	Mrs. Wiesel, . . .	14
Mrs. McKinney, . . .	33	Mrs. Schumann, . . .	12
Miss Alma Dohme, . . .	30	Miss Henry, . . .	10

Gentlemen's Devil among the Tailor's Match: 1st Prize—O. G. Schumann, 1260, in 3 spins. 2nd Prize—A. Schrader, 1050, in three spins. Other scores—A. E. DeReeves, 990; H. P. Hynson, 950; J. Henry, 920; J. G. Beck, 890; C. E. Caspary, 790; J. M. Wiesel, 780; W. M. Fouch, 660; E. Pennock, 660; A. J. Corning, 630; C. E. Dohme, 540; L. Schulze, 440.

Ladies' Devil among the Tailor's Match: 1st Prize—Mrs. O. G. Schumann, 1060; in three spins. Other scores—Miss Alma Dohme, 900; Mrs. McKinney, 750; Mrs. Pennock, 700; Mrs. DeReeves, 650; Mrs. Dohme, 640; Mrs. Henry, 530; Mrs. Wiesel, 510; Miss Ouida Dohme, 430; Miss Adele Dohme, 350.

Gentlemen's Pool Contest: 1st Prize—J. G. Beck, 10 balls in 15 shots. 2nd Prize—A. E. De Reeves, 9 balls in 15 shots. Other scores—A. J. Corning, 10, (draw with J. G. Beck and lost); M. T. Goldsborough, 9, (draw with A. E. De Reeves and lost); Dr. Gibbs, 8; Mr. Schumann, 7; C. E. Dohme, 6; Mr. Pennock, 6; Mr. Sohl, 4; Messrs. Schulze, Schrader, Fouch, Hynson and Ware, each 3; Mr. Wiesel, 2; Mr. McKinney, 1.

Ladies' Pool Contest: 1st Prize—Mrs. McKinney, 4 balls in 15 shots. Other scores—Mrs. Dohme, 4 balls, (drew with Mrs. McKinney, and lost); Mrs. Schumann, Miss Johnson, Mrs. Pennock, Mrs. Wiesel, Miss Adele Dohme, each 3; Miss Henry, 2; Mrs. DeReeves and Miss Alma Dohme, each 1.

PRIZES AWARDED.

PROGRESSIVE EUCHRE.

In the evening, after a dance, Dr. Alfred Dohme, as master of ceremonies, distributed the prizes: First Euchre Prize, to Chas. L. Henry, Large Decorated Vase, presented by Messrs. Whitall, Tatum & Co. Second Euchre Prize, to Dr. Alfred R. L. Dohme, \$15 Assortment of Chemicals, presented by Mess. Merck & Co.

First Ladies' Euchre Prize, to Mrs. Alonzo Miles, $\frac{1}{2}$ lb. Extract Snow Violet, presented by The Winklemann & Brown Drug Co. Second Ladies' Euchre Prize, to Miss Adele Dohme, 1 Can Koko, present by Mess. Hance Bros. & White.

POOL CONTEST.

Ladies' Prize, to Mrs. R. S. McKinney, $\frac{1}{2}$ lb. Extract Pearls of Violets, presented by The Winklemann & Brown Drug Co.

First Gentleman's Prize, to Mr. J. G. Beck, 2 doz. Menthol Cone Inhalers, presented by Sharp & Dohme. Second Prize, to Mr. A. Eugene DeReeves, \$10 Assortment of Chemicals, presented by Merck & Co.

BOWLING CONTEST.

Bowling Prize, to Wholesaler's, 100 Cigars, presented by The Smith, Kline & French Co.

First Ladies' Prize for Bowling 10 Balls, to Miss Ouida Dohme, a Toilet Case, presented by Mess. Muth Bros. & Co. Second Prize, to Mrs. C. H. Michael, a Handkerchief Case, presented by Mess. Muth Bros. & Co.

First Gentleman's Prize, to Dr. Alfred R. L. Dohme, 3 doz. Euthymol Tooth Paste, presented by Mess. Parke, Davis & Co. Second Prize, to Mr. Chas. H. Ware, 1 doz. Rhumatic Cure, presented by Emerson Drug Co. Third Prize, to Mr. Peter Hamilton, 1 doz. Ten-Cent-Ables, presented by Mess. Hance Bros. & White.

DEVIL AMONG THE TAILORS.

Ladies' Prize, to Mrs. O. G. Schumann, Glove Case, presented by Mess. Muth Bros. & Co.

First Gentleman's Prize, to Mr. O. G. Schumann, 3000 Lapactic Pills, presented by Mess. Sharp & Dohme. Second Prize, to Mr. Aug. Schrader, \$10 Assortment of Corks, presented Mess. Chas. Dewitt & Co.

After the prizes were distributed, Mr. Hynson was called out and made a speech, which was received with so much applause, that the hotel guests upstairs could not sleep and rapped for order. Dr. Corning and Dr. Dohme made some very happy speeches also.

After the ladies had retired, the night-owls adjourned to the Atlantic Hotel, to tell stories. Only true stories were to be related. Of course, they were all true, but one story, by Mr. H., about not having any prepared mustard-plasters in his hotel-room, and his wife had the colic, and he was compelled to go down in the kitchen to have one prepared, and after it was ready he rushed up stairs and in his haste, he got into another man's room and applied it to another man's wife, was simply looked on as a good advertisement for S. & J. Prepared Mustard Plasters, which are warranted never to blister and yet are never forgotten as long as they are close to the epidermis.

After a last dip in the Ocean, Friday noon, we parted from Mrs. Shrieve and Mr. Ijams with many regrets and took the lightening express for home.

Constitution and By-Laws OF THE Maryland Pharmaceutical Association.

PREAMBLE.

WHEREAS, To promote progress, and to guard the well-being of our profession within the State, demands that Pharmacists be thoroughly organized, and

WHEREAS, The business relations existing between Pharmacists, Chemists, Wholesale and Manufacturing Druggists are, and ought to be, of the most intimate and confidential character, and

WHEREAS, There exists great necessity for the enactment of just, yet stringent laws, in the interest of the public, to guard against the adulteration of food and medicines, and to confine the compounding and dispensing of drugs and medicines to those who are thoroughly competent.

THEREFORE, *Be it Resolved*, That we, the Pharmacists, Chemists, Wholesale and Manufacturing Druggists, of the State of Maryland, in convention assembled, do hereby organize ourselves into a permanent association and adopt the following Constitution and By-Laws.

CONSTITUTION.

ARTICLE I.

This Association shall be known as the MARYLAND PHARMACEUTICAL ASSOCIATION.

ARTICLE II.

The object of this Association is to bring together the reputable Pharmacists, Chemists and Druggists of the State, that they may by thorough organization and united effort advance the science of Pharmacy, promote scientific research, and in the interest of the Public, strive to have enacted just, yet stringent laws, to prevent the adulteration

tion of food and medicines, and to confine the compounding and sale of medicines to regularly educated Pharmacists.

ARTICLE III.

This Association shall consist of active, life and honorary members, and shall hold meetings annually.

ARTICLE IV.

The officers of this Association shall consist of a President, three Vice-Presidents, a Secretary, a Local Secretary, a Treasurer, and an Executive Committee of three members.

All officers of this Association, except the Local Secretary, shall be elected annually by ballot, and hold office until their successors are elected and qualified. The Local Secretary shall be appointed by the President after the place of meeting shall have been selected.

ARTICLE V.

Every proposition to alter or amend this Constitution must be submitted in writing, and after being read, shall be referred to the Committee on Laws, and lie over until the next annual meeting of the Association, when upon receiving an affirmative vote of three-fourths of the members present, shall become part of this Constitution.

ARTICLE VI.

Fifteen members shall constitute a quorum for the transaction of business.

B Y - L A W S .

ARTICLE I.

The President shall preside over all meetings of this Association; he shall announce all business, receive and submit all proper motions to the consideration of the Association. Upon calling the yeas and nays, and in cases of equal division he shall vote; upon all other occasions he may vote. He shall decide all questions of order, subject, however, to an appeal. He shall appoint all committees, unless their appointment is otherwise ordered by the Association. He shall present at each annual meeting of the Association an address, upon any subject he may select, and shall make such suggestions as may seem to him suitable to promote the interests, and better carry out the objects for which this Association has been organized. He shall sign all certificates of membership, countersign all orders upon the Treasurer, and authenticate the proceedings by his signature. He shall, upon the written request of ten members, call special meetings of the Associa-

tion, *provided*, such call be approved by a majority of the officers of this Association.

ARTICLE II.

In the absence of the President, or his inability to act, his duties shall devolve upon the Vice-Presidents in their order of rank.

ARTICLE III.

The Secretary shall make and keep correct minutes of the proceedings, and conduct all the correspondence of the Association.

He shall carefully preserve on file all reports, essays and papers of every description, and it shall be his duty, under direction of the Board of Trustees, to edit, publish and distribute the Proceedings of the Association.

The Secretary shall be paid an annual salary of fifty dollars. The Local Secretary shall reside at or near the place of meeting, and have charge of arrangements for Annual Meeting

ARTICLE IV.

The Treasurer shall collect and safely hold all dues and other funds belonging to the Association, to the order of the Board of Trustees. He shall report to the Executive Committee, before each annual meeting, the names of all members who have failed to pay their dues. He shall at each annual meeting render a statement of his accounts to the Executive Committee for audit, and report a copy of same to the Association.

ARTICLE V.

The Executive Committee, of which the Secretary shall be ex-officio a member, shall have charge of the roll, shall investigate the claims of all candidates for membership, and have charge of all business not otherwise assigned.

ARTICLE VI.

This Association shall hold its meetings annually at such time and place as the Executive Committee may name. Special meetings shall be called upon the written application of ten members, directed to the President; said written application, before being acted on, must be submitted to the Board of Trustees, and receive the approval of a majority of said Board of Trustees, and at least twenty-five days notice be given of the time, place and object of meeting in special session. A semi-annual meeting may be held at such place as the President may designate, which the Officers and Chairman of Committees shall attend.

ARTICLE VII.

The officers of the Association shall constitute a Board of Trustees for the transaction of any business that may be entrusted to it.

All applications for membership must be handed to the Executive Committee for investigation, and by them reported to the Association. Election of members shall be by ballot—five black balls shall defeat an election.

Applications for membership *ad interim* may be acted upon by the Executive Committee, and if they receive an unanimous vote, shall be declared members of the Association.

Every applicant for membership after receiving the requisite number of ballots for his election shall, upon payment of one dollar, as his initiation fee and two dollars as his annual dues for the first year, and upon signing the Constitution, become a member of the Association.

The initiation fee is one dollar, the annual dues two dollars.

ARTICLE VIII.

Any Pharmacist, Chemist, Wholesale or Manufacturing Druggist of good moral and professional standing is eligible to membership.

ARTICLE IX.

The fiscal year of this Association shall begin July 1st and end June 30. Annual dues are payable in advance for the current fiscal year.

Member elected within three months of the close of the fiscal year, will not pay dues until the beginning of the fiscal year following.

Any member three years in arrears for his annual dues shall, after due notification from the Treasurer, lose his rights as a member.

Any person who has once been a member of the Association, desiring to renew his membership, may do so by paying the current dues.

ARTICLE X.

Any member may be expelled for cause by a three-fourths vote of all the members present at any meeting of the Association, provided however, that due notice be served upon the offending member before action be had in his case, and he have an opportunity to be heard in his own defense.

ARTICLE XI.

Any member who shall pay to the Treasurer at one time twenty dollars, shall be declared a life member, and be forever after exempt from the payment of annual dues, and be entitled to a certificate of membership as a life member.

ARTICLE XII.

A certificate of membership will be issued to any member upon the payment of one dollar.

Any member actively engaged in dispensing physician's prescriptions, who has had not less than four years experience in the retail drug business and is deemed by the Board of Trustees, to be a fit and qualified pharmacist, shall be entitled to a certificate of competency. The names of all members holding such certificates shall be published twice each year, in two daily papers of the City of Baltimore, provided, however, such members continue in good standing.

ARTICLE XIII.

All certificates of competency, membership and life membership shall be signed by the President and Secretary.

ARTICLE XIV.

Pharmacists, Physicians, Chemists, and other scientific men of merit, may be elected honorary members of this Association, and thus become entitled to all privileges thereof, excepting the right to vote.

ARTICLE XV.

The following order of business shall be observed:

- 1st—Reading the minutes of the last session.
- 2nd—President's address.
- 3d—Application for membership.
- 4th—Reports of Committees.
- 5th—Miscellaneous business.

ARTICLE XVI.

The following Standing Committees shall be appointed annually:

A Committee on Adulterations, consisting of three members, whose duty it shall be to report annually, upon adulterations in drugs, chemicals and all other preparations handled by pharmacists.

A Committee on Business, composed of five members, whose duty it shall be to systemize all business before the Association, and present the same in proper form and time for the action of the Association.

A Committee on Trade Interests, composed of five members, whose duty it shall be to report at each annual meeting all matters and facts affecting trade interests that may seem to them important.

A Committee on Legislation, composed of five members, whose duty it shall be, with approval of the Board of Trustees, to submit to the next Legislature of this State the draft of such laws as may seem

to them necessary to protect the public from danger and loss resulting from the adulteration of food and medicines, and from the danger resulting from permitting incompetent persons compounding and dispensing medicines.

A Committee on Pharmacy, composed of five members, whose duty it shall be to report at each annual meeting on pharmaceutical advancement during the year, and generally upon all kindred scientific progress, and to propound such scientific and practical questions for investigation and reply as may seem to them proper.

A Committee on Laws, composed of three members, whose duty it shall be to consider and report upon proposed amendments and alterations of the Constitution and By-Laws. And all such amendments and alterations shall be referred to this committee before being acted upon by the Association.

ARTICLE XVII.

All propositions to amend or alter these By-Laws must be submitted in writing and referred to the Committee on Laws at one session, and may be acted on at the next, or any succeeding session, and the proposition determined by a majority vote.

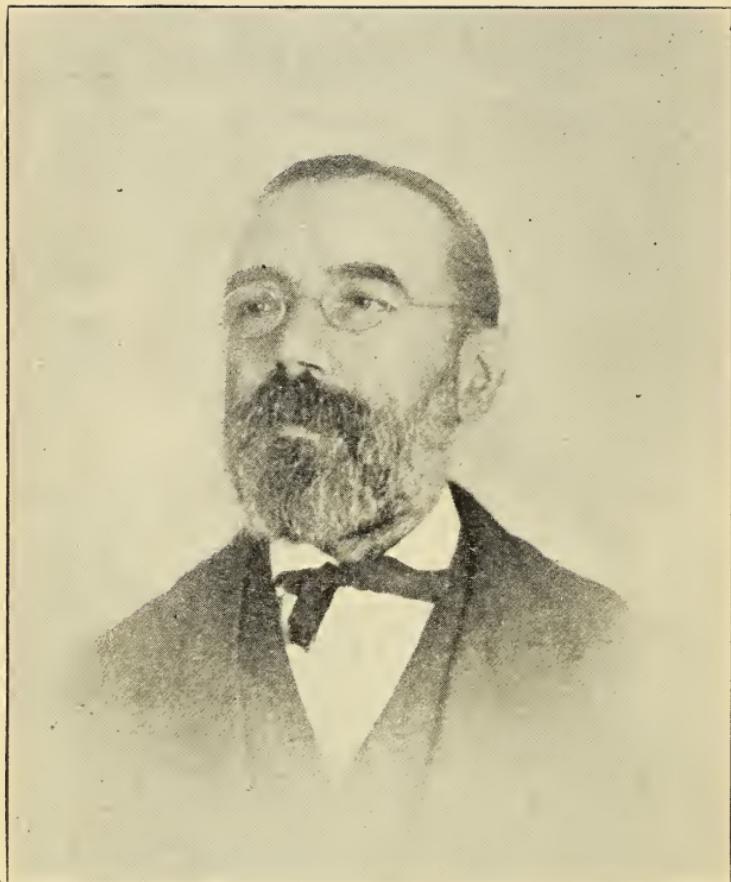
LIST OF MEMBERS
OF THE
Maryland Pharmaceutical Association
IN GOOD STANDING.

ARENDT, CHARLES	Hudson and Canton Sts., Baltimore
AUGHINBAUGH, D. C.	Hagerstown, Md.
BASE, DANIEL	329 N. Schroeder, St., Baltimore.
BECK, JOHN G.	Caroline and Federal Sts., Balto.
BLANEY, FRANK M.	201 S. Gilmore St., Baltimore.
BRATTEN, EDGAR H.	Crumpton, Md.
BOYLE, JOSEPH B.	Westminster, Md.
BOND, J. EMORY, M. D.,	103 E. German St., Baltimore.
BROWN, MERCER	Wye Mills, Md.
BROWN, WM. E.	801 Bloomingdale Ave., Baltimore.
BURROUGH, HORACE	509 W. Lombard St., Baltimore.
BUTTON, E. J. M.	Naval Academy, Annapolis, Md.
CASPARI, JR., CHARLES	Md. College of Pharmacy.
CARNES, J. A.	Cockeysville, Md.
COLLINS, C. E.	Crisfield, Md.
COLLIER, LEVIN D., M. D.	Salisbury, Md.
COOK, J. W.	Hagerstown, Md.
CORNING, A. J.	Bolton and Mosher Sts., Baltimore.
CULBRETH, D. M. R., M. D.	203 E. Preston St., Baltimore.
DAVIS, JOHN A.	Harlem Ave. and Carey St., Balto
DAWSON, GEORGE H.	103 E. German St., Baltimore.
DEILMAN, LOUIS H.	New Windsor, Md.
DEREEVES, A. EUGENE	1216 Conn. Ave., N.W. Wash., D.C
DICKINSON, JAS. A.	Baltimore and Pine Sts., Baltimore
DICKINSON, WILLARD	Greensborough, Md.
DIRICKSON, L. L.	Berlin, Md.
DOHME, A. R. L., PH. D.	Pratt and Howard Sts., Baltimore.
DOHME, CHARLES E.	Pratt and Howard Sts., Baltimore.

DOHME, LOUIS
 DOWNES, E. R.
 DUFFY, HUGH
 EMERSON, ISAAC E.
 ELLIOTT, HENRY A.
 EMICH, C. V.
 FRAMES, J. FULLER
 FELDMAYER, JAMES D.
 FEHSENFELD, HENRY W.
 FIERY, MAX J.
 FREEDOM, A. G.
 FORMAN, E. M.
 FORWOOD, THOMAS G.
 FOSTER, J. WEBB
 FOUGH, W. M.
 GREEN, THOMAS KENT
 GILBERT, J. N.
 GILPIN, HENRY B.
 GOSMAN, ADAM J.
 GROSS, JOHN I., M. D.
 HALL, R. L. LEE
 HAMILTON, PETER
 HANCOCK, JOHN F.
 HANCOCK, JAMES E.
 HANCOCK, JOHN H.
 HALL, E. T.
 HENKEL, C. B., M. D.
 HENRY, J. E.
 HENGST, J. EDWIN
 HORINE, A. G., M. D.
 HOLLAND, J. THOS.
 HYNSON, HENRY P.
 JARVIS, HARRY, M. D.
 JENKINS, THOS. H.
 JONES, OMAR A.
 JONES, PENROSE
 JUNG, J. GEORGE
 KELLER, J. HEISELY.
 KELLY, JOHN I.
 LEARY, J. F.
 LLOYD, F. J.
 MAISCH, HENRY
 MANSFIELD, SAM'L
 MEREDITH, H. LIONEL
 Pratt and Howard Sts., Baltimore.
 Linden and North Aves., Baltimore.
 Hillsboro, Md.
 311 W. Fayette St., Baltimore.
 Lexington and Pine Sts., Baltimore.
 423 N. Howard St., Baltimore.
 Gay and Aisquith Sts., Baltimore.
 Annapolis, Md.
 Clinton and Boston Sts., Baltimore.
 Hagerstown, Md.
 918 E. Fayette St., Baltimore.
 Centreville, Md.
 Bel Air, Md.
 Hanover and Hill Sts., Baltimore.
 North Ave. and N. Charles St., Balto.
 Annapolis, Md.
 Annapolis, Md.
 Light and Lombard Sts., Baltimore.
 Charles and Mulberry Sts., Baltimore.
 1435 Orleans St., Baltimore.
 18 E. Lexington St., Baltimore.
 103 E. German St., Baltimore.
 Baltimore and Howard Sts., Balto.
 Baltimore and Howard Sts., Balto.
 Lombard St. and Fremont Ave., Balto.
 Princess Anne, Md.
 Annapolis, Md.
 East New Market, Md.
 Gay St. and Central Ave., Baltimore.
 Brunswick, Md.
 Centreville, Md.
 423 N. Charles St., Baltimore.
 Elkridge, Md.
 Easton, Md.
 Princess Anne, Md.
 1330 Green St., Philadelphia, Pa.
 Fait Ave. and Cannon St., Baltimore.
 Frederick, Md.
 Broadway and Federal St., Balto.
 Rock Hall, Md.
 Pocomoke City, Md.
 Penn'a and Lafayette Aves., Balto.
 Baltimore and Schroeder Sts., Balto.
 Hagerstown, Md.

MEYER, CHAS. L.	McMechin and Madison Ave., Balto.
MERRICK, W. S.	Trappe, Md.
MICHAEL, C. H.	Reisterstown, Md.
MILLARD, DAVID R.	2200 E. Baltimore St., Baltimore.
McKINNEY, ROBT. S.	Taneytown, Md.
MONROE, CHAS. G.	Annapolis, Md.
MUTH, GEO. L.	15 E. Fayette St., Baltimore.
MUTH, JOHN C.	" " "
MUTH, JOHN S.	" " "
MYERS, C. R.	1836 Edmondson Ave., Baltimore.
ORTTIP, GEO. G.	Church Hill, Md.
OURSLER, JOHN T.	Annapolis, Md.
PARR, JACOB S.	501 Frederick Ave., Ext., Baltimore.
PEARCE, GEO. E.	Frostburg, Md.
PEARRE, A. L.	Frederick, Md.
PENNOCK, EDWARD	13 W. Saratoga St., Baltimore.
PILSON, A. O.	1327 W. Baltimore St., Baltimore.
POWELL, W. C.	Snow Hill, Md.
POWELL, ZODOCH	Snow Hill, Md.
PROSPERR, A.	Annapolis, Md.
RAIBER, ALBERT J. G.	Park Ave. and Saratoga St., Balto.
REDDEN, CHAS. H.	Denton, Md.
ROWENS, W. E.	Wye Mills, Md.
ROBINSON, SAM'L LEROY	Franklin and Greene Sts., Baltimore.
RUDY, WALTER R.	Mt. Airy, Md.
RUDY, H. R.,	Hagerstown, Md.
RULLMAN, W. H.	Annapolis, Md.
SCHRADER, AUGUST	Elliott and Curley Sts., Baltimore.
SCHLEY, STEINER	Frederick, Md.
STEINER, HENRY R.	Frederick, Md.
STRETT, E. O.	1401 N. Charles St., Baltimore.
SIMON, WILLIAM, M. D.	Catonsville, Md.
SMITH, GEO. F.	Sharpsburg, Md.
SMITH, T. W.	Ridgely, Md.
SMITH, O. W.	103 E. German St., Baltimore.
SMITH, OWEN C.	1100 Pennsylvania Ave., Baltimore.
SMIDT, CHARLES	Pratt and Howard Sts., Baltimore.
SIMPSON, CHAS. E.	Trappe, Md.
SCHINDEL, DAVID P.	Hagerstown, Md.
~ LZE, LOUIS	631 S. Patterson Park Ave., Baltimore.
SCHUMANN, OTTO G.	Ashland Ave. and Caroline St., Balto.
SHAD, FREDERICK	1156 Columbia Ave., Baltimore.
SUDLER, THOMAS, M. D.	Baltimore and Harrison Sts., Balto.
THOMAS, JOHN B.	Baltimore and Light Sts., Baltimore.

THOMPSON, ALBERT E.	Baltimore and Light Sts., Baltimore.
THOMPSON, GEO. A.	750 N. Eutaw St., Baltimore.
TURNER, WM. E.	Cumberland, Md.
VAN DEVANTER, R. L.	Hagerstown, Md.
WARE, CHARLES H.	1930 Madison Ave., Baltimore.
WALTS, C. C.	Hagerstown, Md.
WAREHAM, E. A.	Hagerstown, Md.
WERCKSHAGEN, OTTO	258 W. Biddle St., Baltimore.
WESTCOTT, J. W.	423 N. Charles St., Baltimore.
WIESEL, JOHN M.	Madison Ave. and Hoffman St., Balto.
WINKELMANN, HARRY C.	311 Hopkins Place, Baltimore.
WINKELMANN, JOHN H.	311 Hopkins Place, Baltimore.
WHITE, E. RIALL	Salisbury, Md.
WHITWORTH, RICHARD H.	Westernport, Md.
WORTHINGTON, EUGENE	Annapolis, Md.
ZEITLER, E. A.	Havre de Grace, Md.
ZIMMERMAN, T. E.	Emmitsburg, Md.



THE LATE M. JOSEPH MUTH

DIED AUGUST 1ST, 1898.

IN MEMORIAM.

WHEREAS, Our esteemed member and associate, M. JOSEPH MUTH, has departed this life after a successful and honorable career spent in our midst, and has left with us all pleasant and ever memorable impressions of his true and faithful manhood, and

WHEREAS, His services to the drug trade of this State and his interest in this Association have been of inestimable value and unflinching fidelity :

Be it Resolved, by the Maryland Pharmaceutical Association, that our hearts go out with deep sympathy to the family of our esteemed friend and fellow member, in their great bereavement, and that they be assured that he will ever be held by the members of this Association in fond remembrance for his high character, his great ability and energy, his extreme modesty and his conscientiously truthful and devotional spirit, early formed and ever maintained by him.

Be it further Resolved, That a copy of these resolutions be suitably engrossed by the Secretary, and sent to the family of the deceased, and that a copy of the same be published in the next volume of the Proceedings of this Association.

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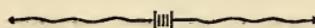
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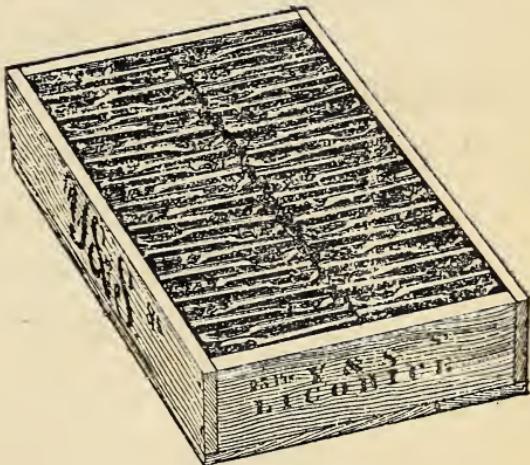
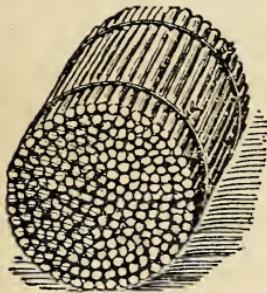
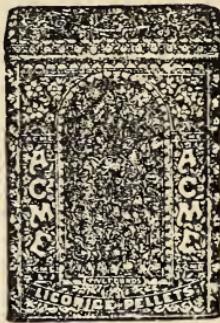
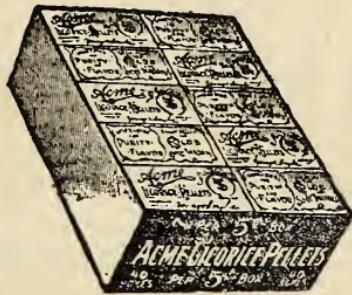
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All of YOUNG & SMYLIE'S licorice preparations are extracted from choice Spanish licorice root, and are manufactured with the utmost care and uniformity.

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DRUGGISTS' - GLASSWARE - AND - CORKS.

Our Prescription Ware is made from our own moulds, and we guarantee "CORRECT" capacities.

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Highest Grade for Druggists' Use.

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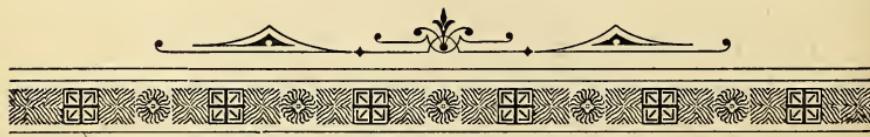
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BRING IT TO THE ATTENTION OF
YOUR PHYSICIANS AND THEY WILL
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let us say, just for instance, and had a physician's prescription to be filled for yourself and about whose particular ingredients you know little, it is quite likely that with due regard for your own personal welfare you would insist on that prescription being filled with ingredients only of the very best quality, so that the desired effects might come the surer and quicker.

In other words, were it to come to medical or surgical treatment of yourself you would emphatically protest against subjecting yourself to any of the many risks incident to remedial agents of doubtful reliability.

You would naturally and perfectly justifiably be incensed at the pharmacist who dispensed on it questionable preparations. **The Price Paid for which would have Secured you the Best Products.**

BUT YOU ARE A PHARMACIST

and remembering how you would be served yourself, should exercise in the purchase of your goods that analytical and discriminating judgment derived by your special training which you would exercise were they for personal consumption. And this is all the more expected of the pharmacist and dispenser of medical and surgical supplies.

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SEABURY'S are standardized preparations of the highest quality, which can be obtained at as low prices as goods of unknown quality and questionable reliability.

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Wyeth's Solution Peptonate Iron and Manganese.

NEUTRAL.

(LIQUOR MANGANO-FERRI PEPTONATUS—WYETH'S).

Per gallon	\$5.00	Per quart	\$1.45
Per five pint	3.50	Per dozen 12 ozs. . .	9.50

This preparation contains Peptonized Albuminate of Iron and Manganese in a *neutral* organic chemical combination, slightly aromatized.

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Wyeth's Granular
Effervescing
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Each bottle supplied
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Per gallon	\$4.50	Per quart	\$1.35
Per five pint	3.25	Per dozen pints	9.00

Each fluidounce represents one-fourth its volume of Cod Liver Oil with Extract of Malt, Fluid Extract Wild Cherry Bark and the Hypophosphites of Lime, Soda, Potass, Iron, Manganese, Quinine and Strychnine.

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Chocolate-coated only 18 cents per 100

Camphor, 1-4 gr., Bellad., Fld. Ext., 1-8 min., Quinine Sulph., 1-4 gr.

Dose.—One every hour, in incipiency of cold, until 4 are taken, then one every 3 hours.

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LITERATURE.**

JOHN WYETH & BROTHER, - - - PHILADELPHIA, PA.

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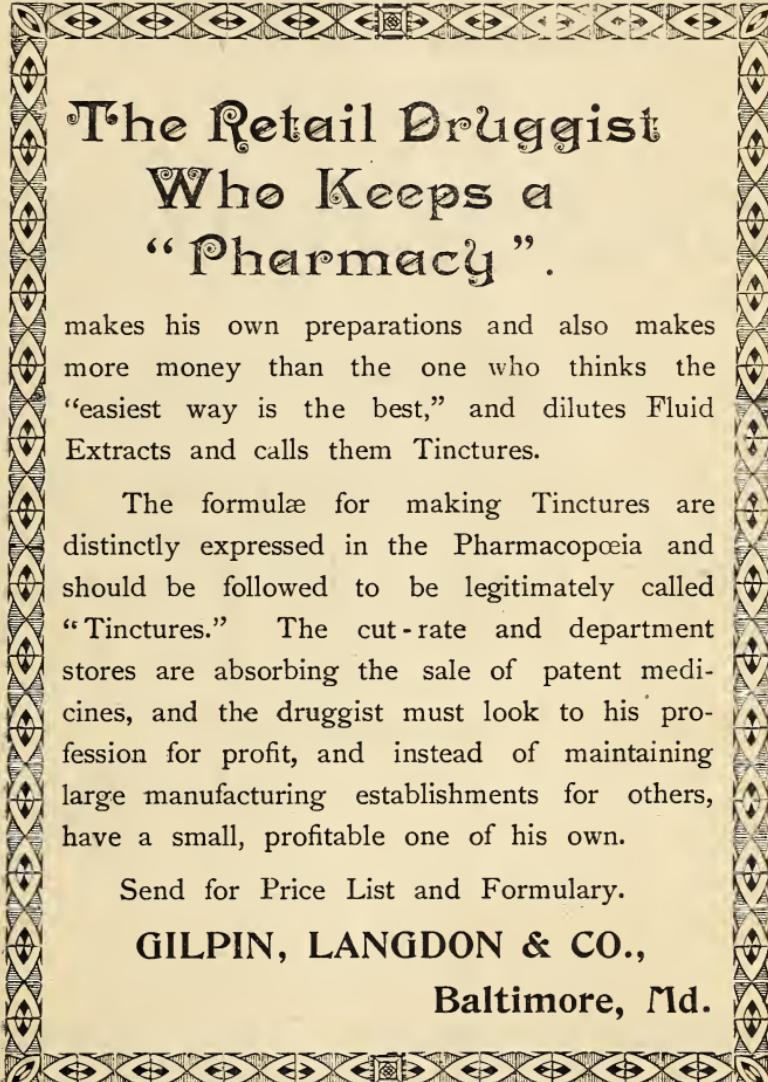
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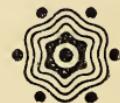
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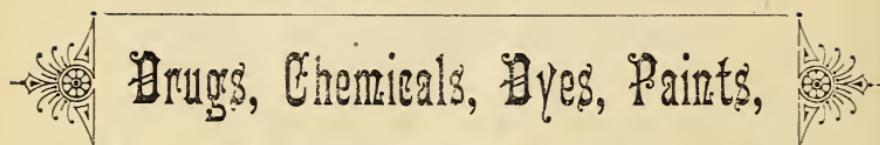
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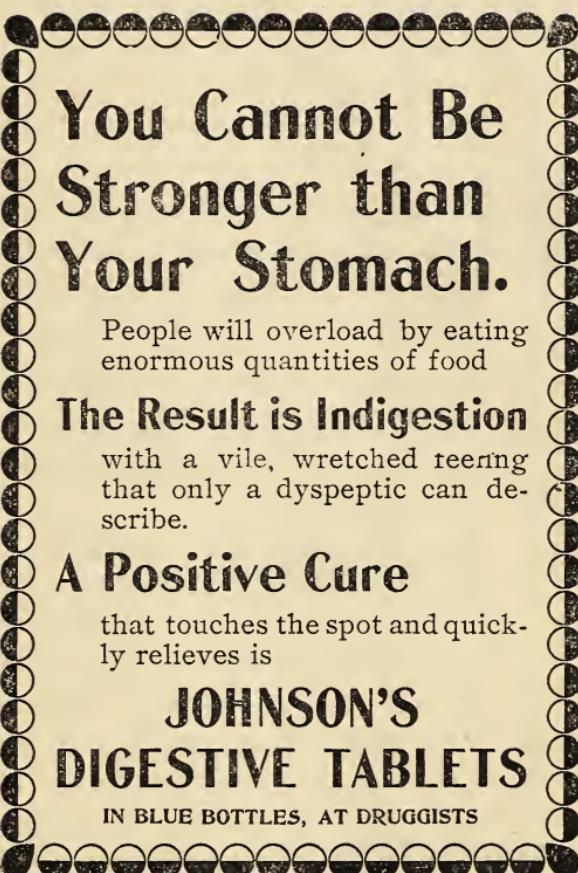
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